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## ILLINOIS MEDICAL JOURNAL

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## Editorial

### AN OPEN LETTER TO THE OFFICERS AND WORKERS OF THE COUNTY AND BRANCH MEDICAL SOCIETIES.


EDWARD H. OCHSNER, M. D.
President, Illinois State Medical Society.


It is high time that the medical profession of this state assume active leadership along those lines in which because of its special technical training it is able to speak with authority. It is our duty to ourselves and the public whom we serve, to exert ourselves and to act in an advisory capacity to the public on many subjects which we have heretofore neglected. In order that we may do this effective, however, it is necessary for a large number of individual members of our profession to inform themselves more thoroughly on these subjects, in other words, to become experts on certain problems that confront the public and the profession. While each one of us possesses a considerable amount of general information on nearly all of the subjects which I am going to mention, no one of us can hope to or be expected to master them all and it is only by assigning different topics to different individuals that the desired result can be accomplished. In making your plans for the year's work may I request you to consider the feasibility and advisability of devoting one meeting, or at least a portion of a meeting, to a consideration of these suggestions, then call for volunteers to take up the different subjects and if volunteers are not forthcoming, assign the different topics to such members as seem particularly well qualified by training, study, experience and temperament to handle them?

We need in this state today five hundred medical men and women who are well informed on many quasi-medical subjects in order that they may act in an advisory capacity to the federal,

state, county and city governments when it comes to matters of public sanitation and public hygiene and many quasi-medical matters of public concern. We need these medical minute men and women who are ready at a moment's notice to appear before legislative bodies, executives, church organizations, women's clubs, associations of commerce and other civic bodies.

Our defeat of the Sheppard-Towner bill was very largely an accident. If instead of the small number of men who made the fight we had had 100 physicians scattered all over the state who were well informed about the objections to the Sheppard-Towner Bill and who would have made it their business to inform the members of women's clubs, civic organizations and the legislators of these objections, the bill never would have had a chance of passing.

The broadening and cultural effect upon those members of the profession who would take up such a study would be of inestimable value. Every physician should have on his desk some one subject pertaining either to the science or economics of medicine in which he is particularly interested and to which he is giving constant thought and study. This is one of the things that broadens the horizon of the individual physician and makes the study and practice of medicine a constant joy instead of drudgery. Among the subjects which I consider worthy of particular attention and study at this time are the following:

1. Federal Aid. 50-50 Schemes.
2. Single Standard for the Practice of Medicine.
   - (a) Cults and Cultists.
   - (b) Quacks and Quackery.
3. General Education:
   - (a) Primary and Grammar School.
   - (b) High School.
   - (c) College.
4. Medical Inspection of School Children.
5. Medical Education:
   - (a) Pre-medical.
   - (b) Medical.
   - (c) Interne.
   - (d) Post-graduate.
6. A Chair for the teaching of Medical Economics in Every Medical College.
7. Nurses' Training.
8. Hospital and Hospital Management.
9. Group Practice.
10. Medical Charities.
11. State Wards:
    - (a) Penal.
    - (b) Delinquent.
    - (c) Insane.
    - (d) Feeble Minded.
    - (e) Blind.
    - (f) Deaf.
    - (g) Miscellaneous.
12. Venereal Diseases Control.
13. Public Health and Sanitation.
14. Personal Hygiene. How, when and where can it best be taught.
15. Periodic Medical Examination of All Citizens.
16. The Doctors' Investments.
17. The Business Side of the Practice of Medicine.
18. The Claims of the Chemical Foundation.
19. Narcotic Drug Control.
20. Lay Control of Medical Affairs.
21. Compulsory Health Insurance. Old Age, Pensions, etc.
22. State Medicine.

Such studies would clear up many now somewhat poorly understood subjects. Take, for instance, the last topic mentioned—State Medicine. Most of us have a vague notion that "State Medicine" would be a serious thing for every one, but how many of us have a clear conception of just what is meant by the term State Medicine and what medical matters can legitimately and advantageously be undertaken by organized society as repeated by the city, state or federal governments. Such a study would supply definite facts in place of conjecture.

The foregoing is simply a suggestion. Other topics may suggest themselves to other physicians. In the smaller county and branch societies it may not be possible to find a sufficient number of members willing or able to make a study of all of these subjects, but each society should do at least a portion of this work. Each member of the medical profession should assume his share of the duty. We should taboo the phrase "Let George do it." If this work is taken up in the right spirit and with the right enthusism I am sure most of us will be surprised at the amount of latent talent which exists among the members of the medical profession. Too many of our members lack self-confidence and many of them would be surprised how well they could fly if they

would but test their wings. Such a movement would be particularly valuable in bringing out and developing a lot of young men with ability and getting them interested in problems of vital importance both to the public and the profession.

The members of the medical profession are best qualified to advise the people along these lines. Most laymen are glad and willing to be advised by us in matters of this sort and willing to follow such advice and it is our duty as individuals and as a profession to accept this responsibility and to fulfill this obligation to the public. The individual members of the medical profession have the ability. Here is a wonderful opportunity. Let us show the public the kind of stuff we are made of.

## THE COMMITTEE ON MEDICAL HISTORY OF ILLINOIS.

In conformity with the report of the editor at the annual meeting in 1922, and again in 1923, and approved by the House of Delegates of the State Society, recommending the preparation for the Diamond Jubilee of the State Society in 1925, the history of the State Society and medical practice in the state since the incorporation of the society, June, 1850, the president of the Society has appointed a committee on medical history of the State Society as follows: Dr. O. B. Will, Peoria; Dr. Geo. A. Dicus, Streator; Dr. Carl E. Black, Jacksonville; Dr. Charles B. Johnson, Champaign; Dr. James H. Hutton, Chicago; Dr. Charles J. Whalen, Chicago, chairman.

Members of the profession having data in their possession that has a bearing on history of medical progress in Illinois will confer a great favor by loaning same to the committee. Data may be forwarded to any member of the committee; same will be duly acknowledged and returned to the owner if desired.

The profession will be interested in learning of the especial activities of the Society from its founding in 1850 until the beginning of the year 1925. Included should be the membership lists; the history of the parent and the district medical societies; publication; police duty and discipline; malpractice defense; a chronological list of officers, biographies of founders; principal officers and members of unusual prominence; meeting places during the progress of the years, and portraits of those who have carried the burden of keeping the Society up to its best capacities. Among the reproductions of historic and important documents should be one of the bill for a charter filed in 1850. None of these points should be overlooked. Many others will come to mind as the task progresses.

Members of the Society will be interested in learning how their organization came into being; who were its founders; what they were like; and what men and women, among the host of members from the inception of the Society until the present day, were most active in cherishing the Society and in forwarding its development. It is inspiring to trace the way in which the membership has increased since 1850; the way in which the standing committees were organized and what they have accomplished; the relation of the Society to progressive health legislation—such as the founding of the first state board of health, and the medical legislation enacted, as well as constructive opposition to vicious medical legislation and the attacks on the Society by the quacks and other interests; the Society's survival of attempts at its disruption; and the objectives for which it has striven during its lifetime.

This history and scores of correlative details will be of interest to the profession and of value as a unit in the future history of the State of Illinois, the representative commonwealth of the Mississippi Valley. When the diamond jubilee arrives this record should be ready.

## PREPARING PAPERS FOR THE ILLINOIS MEDICAL JOURNAL.

*To Members and Contributors:*

It is expressly understood that articles contributed to the ILLINOIS MEDICAL JOURNAL have not been and, if accepted, will not be offered to another journal for prior or simultaneous publication; no objection can be raised for the subsequent reproduction of any of them. Although it is believed that reprinting or simultaneous reproduction of papers in readily accessible journals in a given field is professionally unnecessary, bibliographically undesirable and economically wasteful, however, if a contributor has a paper printed elsewhere subsequently to its appearance in the ILLINOIS MEDICAL JOURNAL (excepting a volume of society transactions), due credit shall be given for original publication. The editor

relies upon all contributors to conform to this rule.

Manuscripts should be typewritten, preferably double spaced, and only clear verified copies presented. The name and address of the author should appear under title of the paper. Literature cited should be assembled at the end of a manuscript in numerical order and should be numbered serially. These bibliographic items in the list should be referred to in the text by numerals in parentheses corresponding with the sequence numerals in the list. Each item in this reference list should consist (in this order) of the (a) numeral indicating its sequence in the list, (b) name of the author, (c) year of publication, (d) exact title of the paper (or book) referred to, (e) full title of the periodical containing the paper, (f) volume numeral for that periodical, and (g) numeral for the first page (or page specially cited) of the paper.

All illustrations should be submitted in such forms as to admit of photographic reproduction without retouching or redrawing. Marginal letters cannot always be set in type and should, therefore, be written in India ink and regarded as parts of the original illustrations; or, in doubtful cases, the marginal lettering may be inserted temporarily, with lead pencil, for suitable attention by the editor. Unless specific instructions are given by authors, the printer will be requested to determine the degree of reduction that may most suitably be applied in illustration. Reproduction of illustrations can be effected most satisfactorily, as a rule, when the originals are large enough to permit of considerable reduction in the plates prepared from them.

## AMERICANS

According to press dispatches the secretary of the Illinois State Medical Society spoke at the memorial service at East Moline in the morning and at Silvis, Illinois, in the afternoon of August 4th. In his address our secretary spoke against internationalism and made a ringing plea for nationalism. He said in part:

"The will to attend this meeting is evidence of Americanism at heart. We meet, not alone to mourn the death of a man, but also to bow in humble reverence to the will of Almighty God in His plan for working out the destiny of our nation.

"I have been asked to speak for the American Legion in memorial testimony to a dead Commander-in-chief of all the Americans. The American Legion is made up of men who have known the spirit of service with all its hard discipline, and it is this phase in the life of Warren G. Harding which makes strongest appeal. The spirit of service is a Godly thing than which there is nothing higher in the Christian world. It is born of love and loyalty.

"To volunteer for arduous service knowing that the immediate reward will be criticism requires stamina and all of the moral courage of which good soldiers are made.

"Mr. Harding, upon his advent to the Presidency knew the fickleness of popular favor. He knew as only a newspaper man can know how public opinion is made and that nothing short of spectacular calamity ever creates it fullblown and to the order of the moment. He knew as most men do not know, of the busy groups and the stillwork in offices and behind closed doors which attend the birth and the nursing and the growth of public opinion. He appreciated to the fullest extent that, as President, his every act would be met with misunderstanding and dissension from some influential quarter and, in spite of this assurance, so conducted himself in a maelstrom of dissapointed self-seekers and of agitated blocs and of excited partisans, through the most trying period of international readjustment as to merit and to gain the descriptive "calm" and "serene." He knew an approving conscience to be his only reward and in this conduct of a citizen when placed in position of authority, lies the supreme test of character.

"On this day without party and with a single creed, we meet not as a group to memorialize a departed friend, alone, but most strangely stirred, we gather in the largest city and the smallest hamlet, a vast conclave of Americans everywhere, to satisfy a heartfelt longing for the expression of a love and loyalty which must have voice. We have witnessed the unparalelled scene of a funeral train driving 2,000 miles past stricken ranks of men and women silent and still, stunned by an emotion too deep for other expression. There is no man whose death can so stop one hundred million people. We like to feel that death is a promotion whereby one who has exemplified the spirit of service may take reward in a higher service in a better field; and from such we derive consolation. Yet here is a common emotion,

vast and deep and different; and the spirit of Harding, a man of service, must rejoice to have been permitted to be the awakening agent for an intense national consciousness which, for the present generation, can never die.

"We mourn the loss of our commander and are filled with an overwhelming sense of surging loyalty to country. We are reawakened with a shock to the knowledge that our own best service lies in the practise and support of two things which for us are inseparable: the tenets of the Christian religion and the Constitution of our fathers."

## OVER-SPECIALIZATION IN PROFESSION

Opponents of the individualistic cite with pride the danger that has arisen of over-specialization in the medical profession with its attendant peril of loss of perspective. Undoubtedly the specialist views the part rather than the whole and the loss of the old-fashioned "family doctor" has both increased the "cost of doctoring" and decreased the opportunities the family doctor had of securing close contact with every face of the life, habits, environment and other causative factors of possible ailments in a case. Memory fails in a recitative of a poem published in a comic weekly where, as a result of specialists in series and sequence, there was nothing to bury when the patient died, but his spirit, and that flew away because everything else has been taken away from him. It is only too true at times. And even that poor devil's estate had gone, what with,

"Fees for this and fees for that
Emptied the wallet, fine and fat,
But still the pains kept chasing him,
Something was turrible wrong with Jim."

The family doctor was a martyr. He worked like an A. E. F. hero and usually he dies poor and has difficulty in finding time in which to die at all. But he would have scorned contract practice or insurance company "shavings." No room for them in those saddle bags with which he trotted, "up hill and down hill," and which held everything from calomel and whiskey to legends as to whence the new baby had come.

The family doctor has wheeled out of sight in his one-time popular doctor's gig. Statistics yield the information that in 1904 there were in the United States 28,142 medical students; and in 1919 only 13,952, or a decrease of over 50 per cent. in 15 years, in the number of men willing to risk their lives, devote the best earning years of their youth to study and then be legislated into political pawns at less financial return than a journeyman plumber or puddler out at the Iron Works. In 1920, the enrollment for medical students showed a total of 14,088 and in 1921 it approximated 14,850. This is alarming; for enrollment in other lines of collegiate study indicated marked increases. Truly men have discovered that you can earn more and risk less being a lawyer to legislate doctors into penury, or in applied big business grinding their skill out of them than you do in "being the goat."

In 1904 medical graduates totalled 5,747; in 1919, 2,656 or a loss of 3,091 practicing physicians. Post-war conditions and new standards of heroism combined to urge a few more gallant men and women to study for the sake of humanity's sake, and in 1920 there was a slight increase in the number of graduates.

## NOT WILLING TO WORK.

### Unnecessary Charity Tends to Pauperization.

One of the discouraging effects of charity is that recipients become reconciled to their fate and lose ambition to become self-sustaining. The curse of alms is its demoralization of character in the recipient.

For ten years, we are told, a Russian immigrant has toiled in this country with the end in view to unite his family in this country. This task has been prodigious, the more so because in addition to saving the money needed, he must assist in feeding and clothing them there. "Starving Russia" was a reality to him, and the constant fear that his loved ones might be suffering was the torturing goal of increased effort and still greater privation on the part of the father that the day might come when, in this land of opportunity, they might be gathered about him and all enjoy the prosperity and freedom found only here.

The day came not long ago. A daughter and her husband were yet in Russia, among those fed on charity. The relief agent who was the messenger of the glad tidings to the family in Russia reports they refuse to come to America, the man evidently in fear of being compelled to work.

"Let Peter Reisel send food and money and we are well off in Russia," was the reported answer

of the son-in-law to the tendered transportation to America.

What a field for speculation as to human nature is opened in this incident!

## MEDICAL EFFICIENCY, CAUGHT IN THE VISE OF ABSURD LEGISLATION SEES RELIEF IN SUPREME COURT DECISION

Congress has no more right to limit the amount of liquor that physicians shall prescribe for their patients, than it has to specify the dosages of strychnine, digitalis, quinine, iron, arsenic or castor oil that are to be administered by the medical profession in the attempt to conserve human life and uphold the welfare of the race.

This editorial is written by a man of mature years, who throughout his life has never chewed, smoked, or drunk intoxicants. While the writer has a deep antipathy to nicotine and alcohol, nevertheless he feels that where these drugs are indicated by the physical condition of a patient, that, as a doctor he should be as free to prescribe them as any other item in the pharmacoepeia. Just where any body of law-makers or lay-theorists acquires a would-be Divine Right of Drug Dispensation is beyond the capacities of the writer's powers of discovery, and his ideas of the ethics of healing.

Public protection and interference with the healing of the sick are widely separated. Social benefits accruing through the Nineteenth Amendment and the Volstead Enforcement Act should not blind the citizenry, nor above all the judiciary, to the dire menace confronting the country, when the practice of medicine is literally lifted out of the hands of skilled physicians, and transferred to those of the checkers of records, the book-keepers and the entry clerks on the payroll of the federal government.

This is exactly what is done when abstract and by no means competent governmental forces begin to determine mandatorily the degree of alcoholic medication that may be required by individual patients suffering from a large variety of diseases. If these forces can act in this wise with whiskey, theirs is the precedent to assume analogous authority in respect to any drug in general use from quinine to Epsom salts. Where is the sane justification for these abstract forces to dare to establish a maximum dosage for individual patients? A maximum dosage, let it be repeated, that if exceeded, no matter what the emergency, means a direct violation of the law!

To give the instigators of the law the benefit of the doubt it is most probable that they never had any idea of interfering with medical practice to the degree that has been attempted. Considering that the technical judgment of the physician means the difference between sickness and health, or between life and death to a patient, it is absurd for Congress, through its statutes to attempt to practice medicine at all, as exampled in its dictation to the medical men, as to what proportions of a drug shall constitute a dose.

Misdirected zeal of proponents of prohibition legislation led them to claim that many physicians prescribe alcoholics for pleasure rather than for pain. The right thing to do,—if this be true —is to hale such unethical physicians into the lime light, prove the charge and make the offenders suffer rather than to put the impost upon the profession at large by limiting the amount of alcoholics that may be prescribed to patients in need of this sort of medication.

In furtherance with this idea, a body of physicians united under Dr. Samuel W. Lambert of New York city, to test the constitutionality of the provisions of the Volstead Act, which limit the amount of spirituous liquor that physicians may prescribe for their patients: "Not more than a pint of spirituous liquor shall be prescribed for use by the same person within any period of ten days, and no prescription shall be filled more than once."

Action begun in February, 1921, resulted in the handing down, May 9, 1923, of a decision by Hon. John C. Knox, a Judge of the United States District Court, holding that the provisions named are unconstitutional, and enjoining the New York federal prohibition agents from interference with medical practitioners in their prescription of alcoholic remedies in kind or amount for their patients.

This decision may be regarded not as a triumph of the "wets" over the "drys" but as a ruling that disclaims the right of government, acting without medical knowledge, to regulate the practice of physicians. The situation has been aptly phrased in the statement,

> "This ruling is purely an appeal to constitutional law for the protection of the

medical profession in their discretionary rights to prescribe in accordance with the dictates of their consciences and in harmony with their views concerning the therapeutic virtues of alcoholic medication. . . . The prescription of alcohol for medicinal purposes is not to be regarded as a part of the liquor problem of this country."

In Montana, also the Federal Court, has held as invalid this provision of the Volstead Act.

It remains for the Supreme Court of the United States to pass upon the principle involved as to the extent to which the federal government may control medical practice. If the federal government can dictate how much or how little whiskey a physician may give his patient, then the federal government can have the same dictatorship over calomel, or even mustard footbaths. Although the decision of the Supreme Court may not be given until late in the year, it is to be hoped that when this judiciary does go on record on the question that it will demonstrate clearly and fully the rights of the profession to prescribe freed from unnecessary, stupid and arrogant interference.

Even the Harrison Act, sufficiently vicious as this measure is with reference to the pestiferous lay-dictation of medical practice, while regulating the method by which narcotics may be secured, very properly contains no element for regulating the amount of opium, codein or heroin which may be prescribed, according to the legitimate needs of individual patients, within any definite period of time.

Where the medical profession is concerned the moot point at issue would appear to lie between the alternatives of fanatical enforcement of the Volstead Act to the degree of dangerous interference with the practice of medicine, or the best aid of the government in conserving the health of the nation and the life of the citizenry.

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## RAT KILLING AND DISEASE PREVENTION

The following formula is recommended by the United States Public Health Service as being the ideal rat killer.

The most efficient rat poison is barium carbonate, which is one of the few which a rat fails to detect. It is safe to handle, and in amounts necessary for use, it is not dangerous to man. It has been found that 15 grains are necessary to kill a cat, 20 grains to kill a chicken and that dogs withstand a dose of 140 grains, while 3 grains are sufficient to destroy any rat.

*Kind of Bait.*—Three or more kinds of bait should be used. Each must be mixed separately with barium carbonate. One kind of bait from each of the following classes should be used. Meat or other animal substance; such as hamburg steak, sausage, canned salmon, eggs, or oysters. Fresh fruit or vegetable food; such as cantaloupe, tomatoes, green corn, baked sweet potatoes, bananas, etc. Miscellaneous foods; milk or cheese, peanut butter, bread, cake, cereals (raw or cooked).

*How to Mix.*—The barium carbonate must be thoroughly mixed with the bait, so that the rats cannot eat the smallest portion of the bait without getting some of the barium carbonate. In the case of such substances as hamburg steak, cheese, etc., use one part of barium carbonate to four parts of bait. Mix thoroughly with a spoon. Substances which cannot be thoroughly mixed with the barium carbonate as just described (for example, cantaloupe, tomatoes, etc.) should be cut into small pieces and thoroughly covered with the barium carbonate and then worked in with a knife.

*How to Set Poison.*—The three kinds of bait, prepared as above, should be divided into small portions, about a teaspoonful each, and placed freely about premises, alternating the different baits in the order named. It should be set at short distances, not over ten or fifteen feet. Do not mix the different kinds of bait with each other.

*General Instructions.*—The morning after baiting, look for dead rats and remove them. Take up baits. Examine these so as to see which have attracted most rats. If any kind of bait has not been touched, use a different bait instead of this. Fresh bait should be used each night.

*How Often to Bait.*—Bait every night as long as rats continue to eat bait.

*Caution.*—Keep fowls, dogs, cats, etc., away from bait.

*Antidote.*—An emetic, followed by Rochelle or Epsom salts.

Bait should be made fresh each day, or at most every second day—a hard stale bait is rarely eaten by a rate. The bait should be distributed in such parts of the building as are frequented

by rats; and this is best done in the evening. A record should be kept of the number of baits so distributed and the number eaten by rats. During poisoning operations, special efforts should be made to keep all food usually available protected from their access.

Extermination of household insects is always desirable and the following suggestions are worthy of note.

There are but two practical ways of getting rid of roaches. Equal parts of sodium fluoride and plaster of paris should be dusted into all crevices likely to harbor them. As sodium fluoride is poisonous to man, care should be used to keep it away from food. Powdered borax or borax mixed with an equal amount of naphthaline flakes is also said to be effective. It is necessary to repeat the operation at intervals in order to keep fresh powder in the cracks to destroy the young as fast as they hatch from the eggs. A much surer way is to fumigate the premises by burning sulphur candles after first sealing the doors and windows of the infested room or rooms with strips of gummed paper. At least 5 pounds of sulphur to be used to every 1,000 feet of cubic space.

Houses sometimes become infected with fleas from dogs and cats. Vacuum cleaning is an excellent means of ridding carpets and hangings of the pest. But the only certain way is to fumigate with sulphur candles as indicated in the previous paragraph or with naphthalene paste.

The fact that bedbugs can live for months without food and can thus remain hidden in crevices in the wall, in beds and in cracks in the floor makes it difficult to control this obnoxious insect. Kerosene, gasoline, benzine or a 5 per cent. solution of carbolic acid are all effective if the bugs can be reached, but since it is usually impossible to force these solutions into all cracks and crevices, fumigation with sulphur is advisable. If it is possible to heat the infested quarters to a temperature of 160 F., by means of furnaces, stoves, or oil or gas heaters, this means will be found effective. It is sometimes necessary to repeat these procedures, as the eggs of the insect are difficult to destroy and time is thus necessary to allow the eggs to hatch.

Head lice may be easily destroyed by applying equal parts of kerosene and olive oil to the hair. Care should be taken in the case of children to prevent the hair catching fire. Tincture of larkspur is less effective. The eggs or nits may be combed out with a fine-toothed comb dipped in vinegar.

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## TRI-STATE DISTRICT MEDICAL ASSN.

*Des Moines, Iowa, October 29-November 1, 1923*

Members of the Illinois State Medical Society are cordially invited to attend and take part in the program.

The following is a partial list of the eminent members of the profession who have accepted places on the program:

Sir Robert A. Falconer, President of University of Toronto, Toronto, Canada.

Dr. Fred H. Albee, Prof. of Orthopedic Surgery, New York Post-Graduate Medical School, New York, N. Y.

Dr. Edward William Archibald, Associate Prof. of Clinical Surgery, University of McGill, Montreal, Canada.

Dr. William S. Baer, Associate Professor of Orthopedic Surgery, Johns Hopkins University, Medical School, Baltimore, Md.

Dr. Willard Bartlett, St. Louis, Missouri.

Dr. Frank Billings, Prof. of Medicine, Rush Medical College, School of Medicine, Chicago, Ill.

Dr. Francis G. Blake, Prof. of Medicine, Yale University, School of Medicine, New Haven, Conn.

Dr. Hugh Cabot, Dean and Prof. of Surgery, University of Michigan, Medical School, Ann Arbor, Mich.

Dr. Richard Cabot, Prof. of Medicine, Harvard University, School of Medicine, Boston, Mass.

Dr. Frederic J. Cotton, Associate in Surgery, Harvard University, School of Medicine, Boston, Mass.

Dr. George W. Crile, Prof. of Surgery, Western Reserve University, School of Medicine, Cleveland, Ohio.

Dr. Byron B. Davis, Prof. of Clinical Surgery, University of Nebraska, School of Medicine, Omaha, Nebr.

Dr. John B. Deaver, Prof. of Surgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. Charles P. Emerson, Dean and Prof. of Medicine, Indiana University, School of Medicine, Indianapolis, Ind.

Dr. John F. Erdmann, Prof. of Surgery, New York Post-Graduate School of Medicine, New York, N. Y.

Dr. Charles H. Frazier, Prof. of Neurosurgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. Leonard Freeman, Prof. of Surgery, University of Colorado, School of Medicine, Denver, Colo.

Dr. Willis D. Gatch, Prof. of Surgery, Indiana University, School of Medicine, Indianapolis, Ind.

Dr. Evarts A. Graham, Prof. of Surgery, Washington, University, Medical School, St. Louis, Mo.

Dr. William A. Jenkins, Prof. of Medicine and Clin-

ical Medicine, University of Louisville, School of Medicine, Louisville, Ky.

Dr. Elliott P. Joslin, Prof. of Clinical Medicine, Harvard University, School of Medicine, Boston, Mass.

Dr. Frank C. Knowles, Prof. of Dermatology, Jefferson Medical College, Philadelphia, Pa.

Dr. Dean Lewis, Prof. of Surgery, Rush Medical College, Chicago, Ill.

Dr. William McKim Marriott, Prof. of Pediatrics, Washington University, School of Medicine, St. Louis, Mo.

Dr. Charles F. Martin, Prof. of Medicine, McGill University, Faculty of Medicine and President of The Canadian Medical Association, Montreal, Canada.

Dr. Charles H. Mayo, Mayo Clinic, Rochester, Minn.

Dr. William J. Mayo, Mayo Clinic, Rochester, Minn.

Dr. Charles N. Meader, Dean and Prof. of Medicine, University of Colorado, School of Medicine, Denver, Colorado.

Dr. Oliver H. Pepper, Assistant Prof. of Medicine, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. G. Canby Robinson, Member of Medical Staff, Johns Hopkins University, School of Medicine, Baltimore, Md.

Dr. Ernest Sachs, Prof. of Clinical Neurosurgery, Washington University, Medical School, St. Louis, Mo.

Dr. Clarence L. Starr, Prof. of Surgery, University of Toronto, Faculty of Medicine, Toronto, Canada.

Dr. William S. Thayer, Emeritus Prof. of Medicine, Johns Hopkins University, School of Medicine, Baltimore, Md.

Dr. Allen Whipple, Prof. of Surgery, Columbia University, College of Physicians & Surgeons, New York, N. Y.

Dr. Ray Lyman Wilbur, President of Stanford University and President of A. M. A., Stanford University, Cal.

Dr. John A. Witherspoon, Prof. of Medicine, Vanderbilt University, Medical Department, Nashville, Tenn.

Dr. Hugh H. Young, Clinical Prof. of Urology, Johns Hopkins University, Baltimore, Md.

SYMPOSIUMS

University of Chicago, Medical Department (Rush). Supervised by Dr. Dean Lewis, Prof. of Surgery.

University of Indiana, Medical Department. Supervised by Dr. Charles P. Emmerson, Dean and Prof. of Medicine.

University of Iowa, Medical Department. Supervised by Dr. Walter L. Bierring, Des Moines.

University of Michigan, Medical Department. Supervised by Dr. Hugh Cabot, Dean and Prof. of Surgery. Associates, Dr. Thomas Addis, Prof. of Medicine, Stanford University, San Francisco, Dr. L. H. Newburg and Dr. A. S. Warthin.

University of Minnesota, Graduate School of Medicine, Mayo Clinic. Supervised by Dr. William J. Mayo.

Northwestern University, Medical Department. Supervised by Dr. Frederic A. Besley, Prof. of Surgery.

Western Reserve University, Medical Department, Crile Clinic. Supervised by Dr. George W. Crile, Prof. of Surgery. Associates, Dr. T. E. Jones and Dr. U. V. Portmann.

University of Wisconsin, Medical Department. Supervised by Dr. John L. Yates, Milwaukee, Wisconsin.

## MISSISSIPPI VALLEY MEDICAL ASSOCIATON

The Mississippi Valley Medical Association, a body that for many years has fostered and maintained the highest standards of Medical Organization will hold its 48th Annual session at Hot Springs, Arkansas, October 9th, 10th and 11th.

A program of outstanding merit and appeal has been aranged. Notable features being, Symposia on Cardio-vascular Renal Diseases and diseases of the upper Abdomen, participated in by some nations' most noted authorities. The individual papers carefully chosen comprise pertinent topics with the maximum instructive value.

A special attraction will be a tour of the Reservation with its wonderful natural phenomena and the session at the famous Government Clinic. All in all this meeting offers a delightful combination of recreation and scientific acquisition. Headquarters will be at the Eastman Hotel. Railroad facilities are ample to the gate-ways of St. Louis and Memphis.

Remember the dates, October 9th, 10th, and 11th. Hot Springs National Park, Ark. Make your reservations now and for more detailed information consult Dr. Chas. Travis Drennen, Chairman of the Committee on Arrangements, Hot Springs, Ark.

## SPECIAL COURSE OF INSTRUCTION ON TUBERCULOSIS FOR PRACTITIONERS

During the Autumn Quarter at Rush Medical College the regular course on tuberculosis is given to students. This course, as in former years, is open to physicians and advanced students in medicine. The course consisting of lectures and clinics as outlined as follows:

Beginning with the history of tuberculosis, continuing the study of etiology, atria of infection, heredity and predisposition, infection and contagion, immulology, histology and pathology, we next take up a consideration of pulmonary tuberculosis, the symptomatology, diagnosis, prognosis and treatment. Particular attention is given to the physical examination by inspection, palpation, percussion, auscultation and roentgenology. The medical and surgical treatment of pulmonary tuberculosis will be fully considered including heliotherapy, hydrotherapy, reconstructional or occupational therapy,

etc. Tuberculosis in children and the various complications like tuberculosis and pleurisy, tuberculosis and pregnancy, tuberculosis of bones and joints, genito-urinary, skin, etc., are studied. Tuberculin and pneumothorax will receive special consideration.

This course will be given every Wednesday and Saturday morning from 9 to 11 o'clock beginning Wednesday, October 3rd, continuing to Wednesday, December 19th, inclusive. For particulars communicate with Rush Medical College, 1748 W. Harrison St.

(This course which in former years was given during the Summer Quarter will be given in the Autumn Quarter this year).

## RESEARCHES INTO THE VISCOSITY OF THE BLOOD IN MORPHINE INTOXICATION

PAUL SOLLIER, M. D.,
PARIS, FRANCE

In the prior researches set forth in the treatise of Dr. Morat ("The Blood and the Secretions in the Progress of Morphinomania and Disintoxication." *Thèse de Paris,* 1911) we have demonstrated that the blood presents during intoxication only slight morphologic and structural alterations, and that there appears only a slight hyperglobulia, with reduced globular and leucocytic resistance. The coagulation, however, which is nearly normal, is slightly retarded.

While the drug is being withdrawn, there is a considerable increase in the hyperglobulia and hyperleucocytosis. During the first few days of withdrawal, polynucleosis will be found to appear, with disappearance of the eosinophile bodies, and mononucleosis with an eosinophilic tendency will set in about the fifteenth day, with the appearance of abnormal shapes (large macrophages and myelocytes).

There appear at the same time modifications in the globular resistance, *viz.,* an increase in the resistance of the red blood corpuscles and a decrease in that of the leucocytes.

The speed of coagulation is above normal, and very pronounced morphologic and structural modifications occur, both of the red and the white blood corpuscles. The red blood corpuscles show indications of hyperchromia, and microcytes and poikilocytes are found to make their appearance. The leucocytes show numerous nuclear and protoplasmatic changes in various degrees, including even complete degeneration of the white corpuscles.

The composition of the blood, as well as the resistance of the red and white blood corpuscles, will not become approximately normal, and the changes or alterations in the white blood corpuscles will not disappear, until about the fortieth day after beginning the withdrawal of the narcotic drug.

While pursuing these researches into the condition of the blood of sufferers from morphinomania, we have investigated the viscosity of the blood in the various stages of intoxication and detoxication.

Four facts made it appear reasonable for us to presume that there must be a more or less pronounced modification of its viscosity during the period of withdrawal, *viz.,* the constant hypotension, the slowing down of the pulse, the excessive coagulability of the blood, and finally the alterations in the red blood corpuscles.

We have examined into this viscosity in accordance with the technical process devised by Messrs. O. Josué and Parturier (blood citrated to the extent of one-tenth part, and use of the Hess viscosimeter).

The results we obtained were as follows:

During the period of intoxication, when there is generally hyperglobulia (polycythemia), the total viscosity of the blood is found to be increased.

This increase is chiefly due to the viscosity of the corpuscles inasmuch as that of the plasma remains normal.

While the narcotic drug is being withdrawn, the total viscosity increases still further, and such increase continues to be due to a much larger extent to the viscosity of the blood corpuscles, than to that of the plasma.

For fifteen to twenty days after withdrawal of the drug of addiction, the viscosity becomes nearly normal, and it does become normal between the thirtieth and the fortieth day, a condition lower, therefore, than it was during the period of intoxication.

The following figures show, by way of example, the results of observations in the case of a person afflicted with the heroin habit, who had been taking the drug in doses of 45 centrigrams for five years.

Its viscosity at that time proved to be:

| | |
|---|---|
| Blood as such (including corpuscles and plasma) | 5.3 |
| Plasma | 1.9 |
| Corpuscles | 3.4 |
| Number of corpuscles | 5,340,000 |

Following my customary technical method, morphine was substituted for heroin. In conformity with my previous statements regarding the more powerful toxic effect of heroin, this substitution results at once in an improvement in the general condition of the patient, and modifies the viscosity of the blood:

| | |
|---|---|
| Blood as such (including corpuscles and plasma) | 4.9 |
| Plasma | 1.9 |
| Corpuscles | 3.– |
| Number of corpuscles | 5,162,500 |

On the next following day, when the patient's drug was being withdrawn:

| | |
|---|---|
| Blood as such (including corpuscles and plasma) | 6.2 |
| Plasma | 2.2 |
| Corpuscles | 4.– |
| Number of corpuscles | 5,650,000 |

Ten days after withdrawal, the viscosity was almost normal:

| | |
|---|---|
| Blood as such (including corpuscles and plasma | 4.2 |
| Plasma | 1.8 |
| Corpuscles | 2.4 |
| Number of corpuscles | 4,850,000 |

Twenty-one days after withdrawal, the viscosity had become normal again:

| | |
|---|---|
| Blood as such (including corpuscles and plasma) | 4.– |
| Plasma | 1.8 |
| Corpuscles | 2.2 |
| Number of corpuscles | 4,612,500 |

Forty days later, the viscosity as well as the number of blood corpuscles still remained the same.

Inasmuch as the patients receive repeatedly purgative treatments while the dose of the drug is being reduced and completely shut off, and as their intestinal (alvine) and other evacuations are extremely abundant, owing to excessive glandular secretion, we consider this excessive viscosity to be due to dehydration of the organisms. However, it appears from the figures that the viscosity of the plasma varies only within very narrow limits, while there is a considerable increase in the viscosity of the blood corpuscles.

On the other hand, we do not consider the variations in the hyperglobulia to be sufficient to furnish an explanation for the rate of increase of the total viscosity. In our opinion, its cause is to be found in another factor, acting in addition to the hyperglobulia found to be present. In our opinion, the factor can only consist in the morphologic and structural changes which occur, as already stated, as soon as the patient is freed from the drug, the friction of the corpuscles being singularly increased owing to the fact of their being out of shape and cut up.

These facts, which are throughout in agreement with those previously established by us in connection with the resistance of the blood corpuscles and the variations in the composition of the blood during the elimination of the poison, demonstrate that the clinical phenomena, accompanying the withdrawal of morphine, are due to organic causes which must necessarily be present, similarly as in the case of certain infectious diseases, and that the psychologic reactions which appear to occur when the drug is withheld, are the result of actual organic conditions, and not to vicious mental habit, as some people still claim them to be.

They enable us to understand, furthermore, the danger resulting from the use of toxic remedial agents (such as hypnotics, sedatives, *et al.*) at the time when these organic changes occur, since they are liable to impede, or stop them completely.—*American Medicine.*

## AS OTHERS SEE US

The attached long quotation is given our readers for several reasons, and we are sure our readers who may not have read the compliments and thrusts in the quotation will enjoy it. In the first place the writer, Mr. John D. Barry, commands a wide hearing in the column which he contributes almost daily to the *Minneapolis Tribune*, under the heading "Living the Life." Our quotation is Mr. Barry's second of two discussions of doctors which have appeared within a few days, and the second is not unlike the first.

It is with certain fallacies, mainly in the form of inferences that seem upheld by Mr. Barry, that we wish to deal. All sorts of inferences will be drawn from the statement that medical men too readily make war on ideas that they consider outlaw and are led to courses of action worthy the Dark Ages. No doubt medical men have acted in the past, and will act in the future, in the spirit of the age in which they lived and are to live; and if martyrs strew the path of civilization they were victims of the Dark Ages when the science of modern medicine and the spirit of the present age were unknown. The same is true in both science and religion; and it is wholly wrong to include the physicians or the clergymen of today with the same classes of men in the Dark Ages.

The statement that the medical profession must not be allowed to maintain an iron grip on legislation, as it would like to do, is amusing, and yet the inferences that may be drawn from it are exceedingly harmful. The only general legislation asked for by the medical profession is that all men who practice medicine (medicine as defined by the State itself) shall obtain the education that common sense says is demanded of men who deal with health and life. The doctors of America have well-nigh made fools of themselves in their efforts to keep the practice of medicine in the hands of educated men. They know well the limitations of medical science and that only the educated mind can deal, with any degree of success, with the problems that confront the physician; and the States recognize this fact by establishing courses of training in their medical schools, as most states do, that will enable such schools' graduates to render the best service possible in their line. If the people are too ignorant to recognize the superior fitness of the educated man over the uneducated one, then the State must protect the health and life of such people by so-called medical-practice laws. Are physicians getting "an iron grip on legislation" when they ask the State to establish a medical school and to enforce a medical-practice act which simply demands that education be a qualification for a license to practice medicine?

The doctors are accused, by inference at least, of total ignorance of the influence of the mind over the body. We venture to assert that the chief charge brought by educated people against their family physicians is that their physicians do not give enough medicine, but depend upon nature to heal both body and mind. It is the presence of this feeling, in one form or another, that has made the financial success of the faith and the mind healers so great. These healers are just as ignorant of the influence of the mind over the body as is the man who does surgical operations or gives drugs with a limited course of surgical or medical education, of the time to do surgery or give medicine.

It is inferences drawn from such statements as those made in our long quotation that send people, educated and uneducated, to the charlatans in medicine.

Physicians are largely to blame for the public's

ignorance of the problems they deal with and of the limitations of the science of medicine. Mr. Barry's jolts will do them good.

## THE MEDICAL PROFESSION

John D. Barry

"There's something about doctors. You can often pick them out in the street."

These words, spoken by a woman, a shrewd observer, I've been reminded of frequently during the past few days. I'm inclined to think they're true. There really is something about most doctors that sets them apart. The explanation isn't to be found merely in their way of dressing. They dress very much as other people do. Perhaps a little more soberly than most men. Among a good many doctors there's tendency, perfectly laudable, to take themselves and their work seriously and to play up.

Perhaps the distinctive quality is the professional air of doctors, altogether different from the air of lawyers, for instance. It's not easy to define and yet it's plain enough. It comes, very largely, at any rate, from intimacy of relation with other people, from sense of responsibility and from a fine kind of assurance, the kind related to self-respect and to the feeling of concern with work of importance.

Here is where most doctors are to be envied, it seems to me. They think their work is worth while. They love it for its own sake. They have an immense advantage over those, a pitifully large number, by the way, who think their work isn't worth while and long to be doing something else even though what they are actually doing may be financially profitable.

In another way doctors are lucky. Their work tends to keep them from growing stoddy. If they are good for anything at all, they have to exercise their wits. The mere routine practitioners, of course, aren't to be counted here. They're like all routine workers. They reach a certain point and there they stick. By sticking there they may do a good deal of mischief. The progressive doctors, for instance, realize that their work is changing all the time. Discoveries are made every day, some of them revolutionary. The best men are always on the track of what is new. And yet they have to watch out to avoid mere faddishness and blundering experimentation.

Here, as all observers of what is going on now in the way of health study are well aware, is a ticklish subject. Though individual practitioners realize the importance of being alert and open-minded, the medical profession as such is of all professions one of the most hide-bound and narrow and tyrranical! It stands on certain principles that it regards as fundamental without being absolutely certain whether those principles are fundamental or not. Only too readily it makes war on ideas that it considers outlaw and on systems out of harmony with established practice. In its very devotion to the maintaining of high standards it may be led to courses of action worthy of the Dark Ages. The history of medicine is strewn with records of martyrdom. In its concern to head off the influence of false gods it sometimes goes to extremes of ruthlessness.

At this time of all times, there is need of a wider range in freedom for the iconoclasts, the breakers down of those traditions that have hardened into impositions operating like dogmas. There's no place for dogmas in medicine. And the medical profession, immensely useful as it has been and it's bound to be in the future, must never be allowed to maintain an iron grip on legislation as it would like to do.

During the past half century there has been an astonishing change in the relation between doctors and the world. Once they were concerned almost wholly with the body. They placed their chief reliance on drugs. The mind and the spirit they left to the educators and to the clergy. With the decline in the appeal of religion, so notably illustrated for example, by the popular indifference today to the reading of the Bible, the doctors began to take on something of the authority so long held by the church and by the schools. At the same time they were beginning to appreciate as they had never done before the way the body and the mind work together and influence each other.

What a tumble drugs have been taking. And yet it's safe to assume that it isn't nearly so great as it's going to be during the next quarter of a century. Many of the very doctors that used to be scornful of the claims made for mental influence are now waking up to the power of that influence and utilizing it in their practice. They are seeing that it's in the field of the mind the most significant revelations are being made.

There's the present-day talk about glands. It may seem as if what has already been found in regard to glandular control were merely physical. It goes much deeper. When it points out the effect of glands on the mind it indirectly calls attention to the effect of the mind on glands. It shows that there's interplay there, and that, no matter how strongly the individual may be influenced by his physical endownment, he nevertheless has within himself the means of remaining captain of his soul. soul.

Some one has called the doctors "the new confessors." The description is apt. In some ways they have more power than the most orthodox of the clergy. There's the matter of operations, for instance. Now that we've passed out of the period when drugs were the chief reliance of doctors we are in another period very similar, when surgeons are having their own way and casually sending people to the operating table. Is it at all unlikely that the not far distant future will look back on the present with amazement as the era of the flesh and bone cutters? Already it looks as if, even in the realm of surgery, the mind might be about to

work an influence almost magical. In the medical profession itself echoes are heard of a questioning about the widespread use of the knife and its effect on organisms so nicely balanced, so complex and, in spite of science, as yet so imperfectly understood.

## INCREASING MORTALITY FROM DIABETES

The recent greatly increased interest in diabetes, due to the discovery and use of insulin, makes timely the recognition of the fact that mortality from this disease has increased considerably for fully twenty years. Since 1919 the rise has been continuous.

The Census Bureau has recently published some interesting figures showing striking geographical differences in the mortality rate resulting from diabetes. Tennessee has the lowest rate for the white population—a little over six in one hundred thousand of population. New York shows the highest—nearly twenty-two in one hundred thousand. New Jersey, Pennsylvania and Massachusetts also show very high rates, while the southern and western states as a whole show low figures.

These geographical differences are in accord with medical findings concerning the disease. It is well known that white persons are much more susceptible to diabetes than colored persons. This fact accounts for the higher death rate in the northern and eastern States than in the southern. It is also known that susceptibility to the disease varies greatly among the several white nationalities. The Jews and the Irish seem especially susceptible to the disease, and the population of New York and New Jersey contain large number of these two stocks. Also, the diabetes death rate rises rapidly with advancing age, so localities where there is a large proportion of old people will give a high rate. This probably accounts for the high death rates from the disease in Maine, New Hampshire and Vermont, where there are more old people than in many of the other States. Another well known fact is that there is a much higher incidence of the disease among women than among men.—*N. Y. M. J. & Medical Record.*

## TOO MUCH MOONSHINE

### Prohibition Commissioner Haynes Says Only One Per Cent of Moonshine Is Genuine Liquor

One per cent of 80,000 samples of liquor seized by prohibition agents during the last fiscal year and analyzed in government laboratories, was genuine, said Prohibition Commissioner Haynes in a statement given out at Washington last week, reiterating that adulteration of bootleg liquor was leading to serious physical consequences.

Mr. Haynes said the four sources of bootleg liquor were moonshine, redistilled denatured alcohol, smuggled goods and liquor illegally withdrawn from bonded warehouses.

Drinking the moonshine liquor, he quoted J. M. Doran, head of the government laboratories, as saying, may not directly cause death, but its toxins are cumulative and result in death if indulged in for a protracted period.

Redistillation of denatured alcohol, Mr. Doran said, fails to remove the inherent poisons, wood alcohol, benzol, ether and other deleterious matter being retained in the beverage. It is impossible to detect the presence of wood alcohol without a chemical analysis and three ounces have caused death.

"Smuggled goods and liquor illegally withdrawn from bonded warehouses constitute the other sources of supply," the statement issued by Mr. Haynes said. "A large part of this is doctored and stretched many times and sold in fake containers. Proof of this is shown in the quality of liquor seized from the rum-running fleets off the Atlantic coast recently."

## ESSENTIAL ENURESIS

Walker in *The Practitioner* of London for February, 1923, states that the habits and diet of the child should be carefully considered and definite rules laid down. As the majority of children suffering from incontinence belong to the "highly strung," intelligent, excitable class, an attempt should be made to counteract all anxiety, excitement, or mental strain. The mere regulation of the amount of homework permitted or the interdiction of examinations is sometimes sufficient to alleviate matters. Physical exercise and outdoor games, unless excessive, are beneficial. Massage, cold baths, douching and subsequent rubbing down with a rough towel—in a word, anything that is likely to improve the muscle-tone and general health—is to be encouraged. Late hours, entertainments and excitements are, on the other hand, to be interdicted.. No great restriction need be placed on diet, beyond the forbidding of articles likely to cause gastrointestinal disturbance or to result in the excretion of irritating products in the urine. The principal meal should be taken in the middle of the day, and only light food taken before going to bed. At least an hour should elapse between the taking of the evening meal and going to bed, for the kidneys secrete more rapidly after a meal, and the urine is more liable to contain irritating products during this period. Coffee or tea should not be given, for saffeine tends to increase the excitability of the bladder and encourage automatic micturition. The amount of fluid taken during the day need not be regulated, but drinks should not be allowed immediately before retiring.

In those cases in which there is a definite weakness of the bladder sphincter, and even in other types of cases, great benefit is often to be obtained by means of deliberate training of the bladder. The child is encouraged during the day to hold his water for longer periods, and learns thereby that immediate submission to the call to micturate is unnecessary. Such experience is not without influence on his subconscious mind, and reacts favorably by night as well as day. The mattress on which the child sleeps should be firm, the bed-

clothes light, and the room kept at a sufficient temperature to prevent chilling. Sometimes, when dealing with an irritable bladder in a child who shows precipitate micturition during the dy, it is beneficial to raise the lower end of the bed so as to relieve the sensitive trigone from pressure, and allow the urine to collect in the upper part of the bladder.

A great many drugs have from time to time been favored in the treatment of enuresis, amongst others belladonna, potasium bromide, nux vomica, antipyrin, extract of rhus aromatica, hyoscine, hydro-bromide, and thyroid extract. Often these drugs have been used indiscriminately, and without any reference to the type of case under consideration. It is obvious that to exhibit a depressant such as potassium bromide to a child whose sleep is already so profound that intercommunication between his higher and lower centers is lost and automatic micturition established, is the very worst form of treatment that can be imagined. Similarly, the use of thyroid extract in a child of the excitable hyper-thyroid class is equally disastrous. It is only by careful consideration of the class of case under treatment and the kind of sleep to which he is subject, that satisfactory results can be obtained from drugs. Taken as a whole, the drug which is most often found useful is tincture of belladonna, beginning with 7 minims t. d. s. and rising up to 20 or more. During the period of treatment with larger doses of belladonna, the child should be under strict medical supervision to prevent the danger of an overdose. Thyroid extract, strychnine, and other excitants should only be used when dealing with the apathetic, atonic class of case.

Local treatment in young children should be avoided as much as possible. In older children it is more likely to be effective, but whether this is due to any real local action or to suggestion is often difficult to decide. Catheterization, dilatation, and instillation of silver nitrate in the posterior urethra have all been used at times, and have claimed success. In the same category of treatment must be placed the somewhat barbarous method of ligature. This consists of closing by means of a ligature or collodion the end of the prepuce, so that it is distended at the moment of involuntary micturition, and the patient awakened by the pain, A less brutal and more ingenious modification of this principle has been devised by Genouville,, who, in order to wake the child at the moment of involuntary micturition, arranged a metallic network in the bed which when moistened completed an electric circuit and caused the sounding of a bell.

Finally, amongst the local methods of treatment must be mentioned electricity. The most usual method of employment is as follows: A urethral electrode is used, consisting of an insulated sound terminating in a metallic, olive-shaped button. This electrode is introduced into the prostatic urethra, and then withdrawn sufficiently to cause the metallic button to be pressed against the membranous urethra. It is then connected with the negative pole of an induction coil, the positive pole of which is linked up with a large abdominal electrode. The intensity of the current should be such as to cause no distress to the patient, the sitting lasting five or six minutes and being repeated every three or four days. When electrical treatment is applied to small children, intra-urethral methods are unsuitable. In such a case the electrode, instead of being introduced into the urethra, is merely pressed against the posterior part of the perineum in front of the anus. In addition to faradic, galvanic electricity may be employed, or in the case of adult women the high frequency current. The exact method in which electricity acts in such cases is a matter for speculation. When the sphincters are atonic, it is obvious that excitation by means of electrical stimulation is likely to be beneficial. In older children, in whom other treatment has previously failed, "electrical magic" may have a profound psychological effect.

## DRUGGISTS TO TEST LIQUOR LAW

A test to determine whether the Federal government has the right to enforce its rules and regulations under the Volstead act pertaining to the use and sale of non-beverage liquors and alcohol on druggists in New York State was filed early in July in the New York County Supreme Court by Alexander Savitch, a druggist of 10 Hester Street, against Palmer Canfield, Federal Prohibition Enforcement Director.

The suit is in the nature of an application for an injunction to restrain the Federal authorities from interfering in any manner in this State with the pharmaceutical use and sale of liquors and alcohol not intended for beverage purposes.

Mr. Savitch, in his complaint, recites his grievances as follows:

"That upon information and belief, defendant has no power or authority under any law of the United States to stop complainant of his right to purchase and use alcohol for manufacturing U. S. P., N. F. and A. I. H. preparations; to compound physician's medicinal prescriptions in which alcohol is used as a solvent, for extraction and preservation and as a therapeutic agent. Complainant further avers that the Eighteenth Amendment of the Constitution grants to the government only the power to prohibit the manufacture, use and sale of intoxicating liquors for beverage purposes, and that the State of New York, or the people thereof, have reserved all powers for the use and sale of alcohol and liquor for non-beverage purposes by licensed pharmacists and registered pharmacies in the State of New York.

## EARLY OBSERVATION

The Teacher—What bird has been thought by some to bring sorrow and trouble to houses over which it hovered?

Bobby Multikids—The stork.

## THE WAY THE CHIROPRACTORS DO IT

The following is from the program of the Twentieth National Convention of the U. C. A., August 26 to 31, 1923. The Palmer School of Chiropractic:

I wonder how many chiropractors realize the tremendous struggle that is going on between chiropractors and those other practitioners who are parading under the fair name of Chiropractic, but who practice anything but that? I wonder how many of us realize the organized, concerted effort that is being made to strangle the movement of us straight chiropractors for the ultimate goal for which we are striving? I feel that if everyone of us were fully awake to the situation, we would be more actively engaged than we are in protecting our interests.

The P.S.C. has staked its future upon the belief that the straight boys and girls in the field were squarely behind us, when it came to protecting the interests of Chiropractic. We saw that the ultimate end of permitting other methods to parade under our good name would eventually lead to oblivion and lost confidence in the public mind, because there would be many brands of Chiropractic so far as the public believed.

For this reason we set about to educate the public as thoroughly as we know how on the subject of Chiropractic. We have educated them only on Chiropractic. We have made no attempt to cater to the hanger-on who is attempting to ride to success on our good name. As a matter of fact, the campaign of The Palmer School has been effective in bringing to the public the message of what Chiropractic is, and in just the proportion that it has done this, it has affected the business of the hanger-on. This could have only one result, and we foresaw it in the beginning; yet, because of our confidence, and because of the fact that we knew the public had a right to the facts, we carried on our campaign.

The natural result of it all is that every anti in and out of the profession, is organized against us. Every man whose business has been hit by our campaign, is no longer a passive enemy, but he is an active fighting machine, organized with all of the other antis in a crusade and a campaign against The Palmer School.

We are frank to admit that this campaign has hurt us. We are frank in telling you straight boys that the work of the antis has been effective, in part, and that today we seriously feel the effects of that organization. Our future rests in your hands. We have always had faith in you. We still have faith in you, but we want you to realize just exactly the situation we are in, and we want you to redouble your efforts to bring students to The Palmer School FOR THIS COMING SEPTEMBER CLASS, because by this method alone will we be able to carry on our campaign of keeping Chiropractic clean. Our battle is your battle; our interests are your interests, and our aims are the same. The campaign that we have been carrying on has been for the purpose of protecting the public, of protecting Chiropractic, and of protecting you. In return we are squarely asking that you get behind us actively and fight to bring to The P.S.C the support that it must have to continue.

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## PROTEIN HYPERSENSITIVENESS CAUSING ASTHMA KNOWN FOR CENTURIES

### Nothing New Under the Sun

If the average doctor were asked to name some essentially new and modern ideas concerning the reaction of the body to outside agencies, it is probable that many would at once think of those which the study of immunity has brought to our knowledge, and among these none seem more remarkable than the specific and nonspecific hypersensitiveness so often met with.

It seems possible, however, that as early as 1552, Cardan had observed the effect of hypersensitiveness against goose feathers in the causation of asthma and applied his knowledge in treatment with success. John Hamilton, Archbishop of St. Andrews, Edinburgh, was forty years of age in 1552, and for ten years had suffered from asthma. In spite of treatment by eminent physicians, he grew worse, and finally called to his aid Jerome Cardan, professor of medicine at Pavia, the most noted physician of Europe. For forty days after his arrival he did not begin treatment, but allowed the archbishop's physician to carry out the advice given at a consultation held in Paris with Sylvius and Fernel, from which no improvement resulted and Cardan then took charge of the case. The most interesting feature of Cardan's treatment was that he forbade the archbishop to sleep on a feather bed and made him use a linen pillow. The archbishop improved speedily and was soon so well that he consented to Cardan's return home. He gave him 1,800 gold crowns, much more than the price agreed upon, in addition to many presents of considerable value.

This interesting story, of which only the barest outline is here given, may or may not indicate that Cardan had observed the untoward effects caused by hypersensitiveness. There is no proof in the narrative that the interdiction of the feather bed was the result of experience, and the cure may have been the result of getting away from the feathers, though ordered by the physician for others reasons.

The patient was "a great eater and drinker, and took no exercise; he worked hard, kept irregular hours, and was not shy with the ladies." Cardan's treatment was characterized by common sense. He avoided drugs and blood-letting, and ordered a routine in which "personal hygiene, diet, exercise, cold baths, rest and sleep" were the factors depended upon.

Cardan was a remarkable man in many ways, had a wide acquaintance among notable men, was a student and an observer, a rigid critic of himself, and in addition to his medical attainments was a noted writer on mathematics and algebra. He left an autobiography

which has been called "one of the three great biographies in literature."

May not such a man very well have observed cases of protein hypersensitiveness, and applied his knowledge in his practice? Why did he forbid the use of the feather bed, and what part did this play in the recovery of the archbishop?—*Am. J. of Public Health.*

## WE HAVE GONE WILD ON STATISTICS

The *Manufacturer's Record* (Baltimore) says: Here in the United States "we have gone wild on statistics and equally as wild on the fetish of business cycles." The Baltimore editor feels it is time to complain that "the country is flooded with the views of men who pose as great authorities and great statisticians, pointing out by their charts of cycles and statistics this, that and the other, most of which never happens. If once in a while these prognosticators prophesy aright, they use that fact as a basis for building up for themselves a great reputation as seers and prophets of business." Continues the Baltimore editor:

"The average business man who has intelligence enough to conduct a business of any importance is generally in a better position to foretell business conditions than are many of these self styled prognosticators or statisticians or business-cycle advocates. The country is surfeited from universities, from government sources, and from private concerns, with statistics. We breakfast on statistics, we lunch on statistics, we dine on statistics and the nation has statistical indigestion, and its brain is fagged and beclouded by statistics.

"The writer of this has for more than forty-five years studied statistics, sectional, national and world statistics, and he recognizes that there are many statistics of much value when rightly interpreted. But we believe that at least one-half of all statistics put out at the present time to influence business men one way or the other should go to the scrap-heap of useless figures. Every department of the Government seems to have gone crazy over statistical work. Every department is apparently afraid that some other department will beat it in the race, so day after day the mails are loaded down with the reports of this, that and the other from government sources, bearing on everything on earth. About nine-tenths of this information is practically worthless. One-tenth of it would cover everything that the country needs to know about statistics.

## "HOME HOOCH"

Delicious, healthful and cooling summer drinks can be made in the home and enjoyed by the whole family. The children can be easily taught to make these drinks.

*Bulletin, Chicago Department of Health*

## ENURESIS IN CHILDREN

In the *Archives of Pediatrics* for March, 1923, SAXL and KURZWEIL state that having tried all the mentioned methods they will try to give a concise description of the treatment as used by them. First and foremost, they standardized certain rules and regulations pertaining to all cases of enuresis which must be carefully observed by the parents and the patient. For the sake of clarity, they have combined these rules and the explanations and reasons for their use:

No coffee, tea, cocoa, or spirituous liquors. The reason for this must appear self-evident, because the first three mentioned all contain caffeine, which is a well-known diuretic. Alcoholic beverages also act as diuretics by irritation and stimulation of the renal parencryma.

No fluids, of any nature, four hours before the hour of retiring. In addition, they insist that the supper should consist of solid food at a stated time, and emphasize the fact that the child *must void* before retiring. They do this in order to have the bladder emptied at bedtime, and so they are sure that the diurnal specimen has been voided.

Hydrotherapy, which consists of a cold friction rub to the chest, sides, and lumbar spine, is sometimes advised in older children in order to relieve the hyperemia and congestion of the internal organs.

Elevate the foot of the bed one or two inches from the floor. This is done to allow gravity to aid by the urine flowing against the bladder vault rather than the trigonum, where it acts as an irritant.

Try to have the patient sleep on the right side and not on the back. Congestion of the spine results from the latter posture and is avoided in the former. This can often be accomplished by the late Professor Jacobi's method of tying a towel around the patient with the knot at the back.

Hands to be kept out of coverings. To prevent subconscious friction of the genitals.

Take prescribed medicine regularly and exactly as directed.

Patient or parent must present, at each subsequent visit, a written chart of his or her progress. They require this so as to encourage enthusiasm on the part of the patient, and, at the same time, they have a chance to estimate the degree of improvement obtained in a given period of time.

They divide therapeutic treatment into several groups according to the etiology.

Under Group I the focal causes, namely, oxyuris vermisularis, masturbation, cystitis, and vulvovaginitis; and Group II, the general ailments, namely, anemia, malnutrition, neurasthenias and neuroses, and neurogenic diseases; they treat each case by the remedies that are well known to the medical profession at large. They, however, mention strychnine as an adjuvant in the cases of anemia

and malnutrition, where asthenia and not hyperemia is the etiological factor.

In Group III, when there are endocrine disturbances thyroid and posterior pituitary extract are given because it is well known that the posterior pituitary has a tonic effect upon the bladder musculature.

Group IV is treated symptomatically.

For Group V they have found the use of atropine in large doses to be of considerable assistance. This is given in the following way:

Atropine sulphate, 0.0065;
Aq. dest. q. s. ad 30.000.
M. et sig, gtts. as directed.

One drop of the above solution is equivalent to 1-500 gr. of atropine. They start by giving 1 to 3 drops t. i. d., increasing one drop in 24 hours until the desired result is attained. The fact must not be forgotten that while the patient is under the atropine treatment great caution should be taken regarding symptoms of toxemia, which are disturbances of vision, dry mouth, and rash. The tolerance of children to atropine is greater than that of adults. They state they have often gone as high in their dosage as 1-25 of a grain of atropine t. i. d. without evidence of toxicity. [We would consider this dose definitely toxic.—Ed.]

In brief, they feel that the following conclusion is justifiable, namely, that the majority of cases of enuresis are amenable to treatment when diligence and perseverance are patiently observed by the physician.

## WHY NOT MAKE THE PRESCRIBING OF ALL DRUGS UNLAWFUL

The bill to prohibit physicians from prescribing beer for medical purposes is one of the most offensive pieces of tyranny in our history. Whether it is the tyranny of a majority, which we doubt, or of an organized minority bullying the timidity of politicians, which we believe, it should be protested vigorously as inconsistent with American principles and the fanatical perversion of a reform.

There are any number of deadly poisons in the materia medica used legitimately for alleviating pain or for some other therapeutic purpose. Morphine, chloral, strychnine, arsenic, cocaine, many coal tar products, are in familiar use in many forms. But they are also abused by addicts, as is well known, and the agencies of the law are not able to prevent this evil any more than they are able to prevent murder and robbery.

Why not, therefore, make the prescribing of all these drugs unlawful and prohibit their manufacture or importation?

That would be analogous to the prohibition of the prescription of beer for medical purposes. There are morphine and cocaine addicts. To protect them and prevent the abuse of these drugs, why not deprive all those who need them of their benefit? Because there are doctors and druggists who carry on an illicit triffic in habit making drugs, why not prohibit all doctors from giving their patients the benefit of such drugs in proper circumstances?

The medical prescription of beer might be abused by a small minority, always under the fear of exposure and prosecution. It is because of this minority that the normal and law abiding must be deprived of a legitimate use. This is an illustration of the perverted viewpoint of the extremeist prohibitionist and his abettor, the professional moralist agitator. Our American instinct as freemen, our American common sense should revolt against such perversion of right policy, and those who recognize the good achieved by the abolition of the saloon and the workings of prohibition in its general application should be the first to resist the excessive proposals of extremists. Intemperance in temperance laws deserves and will receive rebuke. The reaction against such a measure as the medicinal beer law will be a good deal worse for the cause of temperance than any abuse of the right of prescribing beer could be.—*Chicago Journal.*

## NEW TREATMENT FOR PARESIS

Paresis, the disease known as general paralysis or softening of the brain, has always been considered by physicians to be a progressively fatal disease. Few patients who suffer from this disease recover. The mind is affected, and during a long period of years the symptoms increase in their intensity. When the drug known as arsphenamine (salvarsan, "606") was discovered to have special virtues in the treatment of syphilis, and when it was known that general paralysis was due to the effects of syphilitic disease, it was hoped that some advance might be made in controlling the progress of paresis. Thus far attempts have not resulted in any striking recoveries, although in some instances highly beneficial effects have been reported. This state of affairs has caused medical investigators to continue their attempts to find a method of controlling the progress of paresis. During the last few years certain German investigators, basing their efforts on the knowledge that certain types of bacteria cannot live in the presence of others, just as certain human beings find it difficult to live with other species of animals, have attempted to reach the cause of paresis by injection into patients with paresis the blood of patients with malaria. While the results have not been conclusive, the method has been carried out on a large number of patients and in a considerable number of instances with sufficient success to warrant the belief that it may have virtue. It is interesting to learn the process by which the investigators arrived at their decision to use this method. They had observed that patients with paresis tended to improve when they became ill with malaria. It has long been known that malaria may be controlled by the proper administration of quinine. It was therefore decided by the European investigators to inject blood infected with organisms of malaria into the patients, and then, after they had been subjected for a certain

time to the malaria, to cure them of the latter disease with quinine. As has been said, the results in many instances were strikingly effective, and the method has now been extended to certain institutions in this country where it is being studied under controlled conditions. No doubt within the next few years its real value will become apparent.—Hygeia, June, 1923.

## FEHLING'S TREATMENT OF DYSMENORRHEA AND STERILITY

Schmidt in Monatsschrift für Geb. and Gynäkologie, Berlin, Jan. 1923, says: that Fehling's treatment has given satisfaction for ten years in the Bonn women's clinic, but he can find no reference to it in modern textbooks. A fenestrated cannula, 5 cm. long, with flaring mouth, is introduced into the cervix, after curettement, and is left for three days. Then the cannula is changed, and the uterus cavity flushed with 1 liter of a 1 per cent. solution of liquor formaldehyde. The change of cannulas and the irrigation are repeated two or three times, with three day intervals. The woman must stay in bed for five days to allow oversight of the temperature. If it runs up, the cannula must be removed. Of his seventy-seven dysmenorrhea patients, 30 per cent. were entirely cured and 9 per cent. much improved; 17 per cent. were cured for a year or two, but 44 per cent. were not benefited. Conception followed in from one to eight months in 35.5 per cent. of the thirty-one cases of sterility.

## AMERICA LEADS IN MEDICAL PROGRESS

"America now leads the world in scientific medical progress. Germany and the other European lands now have neither the instruments to 'carry on' nor have they the money with which to develop, manufacture or buy them."

Dr. Gustav Bucky, of Berlin, internationally known authority on the treatment of cancer and other deep seated diseases which have baffled medical science, said this at a dinner of the medical staff of the Mt. Sinai hospital at the Drake hotel, August 3.

The eminent German Roentologist is in America on a commission from the German government. It was stated at the dinner that efforts are under way to induce him to stay in Chicago to carry on some of his research and his cures with the X-ray.

"Some of the men who have come here from Germany," said Dr. Bucky, "have spoken with a 'big mouth.' They have told of their wonders and made false promises to the world. It is time to end that sort of thing.

"I want to say that I have found many wonders since I came to America. There has been great progress here. We'll have to work hard in Europe to catch up with you. Scientific progress now must be made in America. We haven't the money in Europe to work scientifically."

Dr. Bucky, according to the physicians present, after sixteen years of research, has practically revolutionized the use of the X-ray in the treatment of diseases. He has developed the measurement of the rays and the use of "long, soft rays" instead of the "short, hard rays, in general use in America."

He explained his healing powers with the X-ray, thus "The physician can't heal; the healing power is in the body. We physicians treat—the body heals. That is the secret of my work with the X-ray. The X-ray stops the functioning of the diseased cells and so works its cures."

## THE PATHOLOGY OF DEMENTIA PRECOX

Our worthy contemporary the Medical Record some time back gave as the pathology of this disease the fact that it is usually characterized pathologically by neuroepithelial lesions of the brain. Macroscopical examinations, however, do not give constant results; occasionally a bilateral atrophy of the cerebral hemispheres is noted, but the atrophy may likewise involve only one side or it may be partial and limited to the frontal lobe. It has a predilection for the areas of association and respects those of projection to a great extent, occurring in them only in cases of long standing. The atrophic process is never accompanied by changes in the meninges or vascular system, and the pachymeningitis that has been encountered at autopsy of subjects who have lived to a certain age is the result of senescence. The atrophy of the cerebral or cerebellar hemispheres has nothing characteristic, as it is met with in the insane in general. Macroscopically, the cord appears normal in most cases, but there may be some anteroposterior flattening. The meninges are intact, while the cerebrospinal fluid offers nothing abnormal in aspect.

On the other hand, the microscopical lesions encountered are pathognomonic of dementia precox and are seated exclusively in the neuroepithelial tissue of the cerebral areas of association. The changes consist of a granulopigmentary degeneration with atrophy of the neuron, frequently with vacuolization of the protoplasm and destruction of its prolongations, dendrites, and axis-cylinders, all of which provoke cell autonomy and therefore are essential for the symptom dementia. The neuroglia proliferates in direct ratio to the atrophy of the neuron. In no case have lesions of the vessel walls (diapedesis, cell infiltration) been met with which could be attributed to the syndrome of dementia precox. Three types of lesion exist, namely, the preliminary lesions which are of congenital origin and most inconstant; the immediate lesions which occur at the phase of full development of the process, and lastly the consecutive lesions which mark the arrest of development of the neuron. The preliminary and consecutive lesions have only a relative importance from the viewpoint of pathology by reason of their origin. Etiologically and pathogenically they are of interest because on the one hand they reveal the influence of heredity while on

the other they indicate the time at which the psychosis may have developed.

Alone, the immediate lesions are important pathologically as they occur at the stage of full development of the morbid process and are constant and identical in themselves. It may be objected that they are not peculiar to dementia precox, but it is a remarkable fact that these lesions alone exist in this morbid process without any vasculoconnective tissue changes. An elective property of the pathogenic element for the nuron cannot be admitted, this element being essentially variable, and it is more logical to suppose that at the origin of the lesions of the brain in dementia precox there is a special vulnerability of the neuron manifesting itself by a lessened organic resistance (meionexia), ending in the bankruptcy of the nerve cell under the influence of some pathogenic factor whose action is not sufficiently intense to provoke a toxiinjectious psychosis. The meionexia of the neuron may be due either to a neuropsychopathic heredity, especially cerebral, or to the action of some pathogenic factor arising during the previous existence of the patient. Therefore the lesions of dementia precox are changes having an accidental origin.

The influence of heredity is here reduced to its simplest expression. Heredity of toxic or infectious processes in the ascendant provokes degeneration and not dementia precox, which is a primary psychosis forming an entity and not a finale. If, on the other hand, this psychosis appears to end in a confusional state it is in reality a dementia precox with a dramatic clinical debut, clinical only because the initial stage of the disease already dates far back into the past, the first early symptoms having generally passed by unnoticed. Much has been said regarding the morbid agents which may give rise to this psychopathy, but it is probably logical to admit that the lesions of dementia precox are provoked by an autointoxication of sexual, gastrointestinal, hepatic, or other origin—in other words, an endogenous factor acting upon an organically enfeebled neuron.

Dr. Bayard Holmes, one of the greatest students of this disease, in commenting upon the pathology of dementia precox as given above says: that quite the most pronounced evidence that has appeared in the record or any conspicuous journal of the physical character of the disease is that it does not notice many quite as positive pathologic features, that further supports the non mental origin of this desperate condition is:

1. The concentration of the blood 5,500,000 red corpuscles.

2. The low blood pressure, less than 110 mm mercury.

3. The high intra spinal pressure, more than 150 m m of water (the patient on his left side.)

4. The index of brain weight to cranial contents is above normal.

5. The cecal stasis; the barium meal remaining behind the ring of cannon more than 24 hours, and the tort and redundancy behind the ring.

6. The increased indolethylamine excretion and the increased betaimazoleth elamine excretion.

7. The adreolin paradoxes. The intra muscular injection of one half C C of P. D. & Co's 1-1000 solution of adrenolin does not raise the blood pressure as in the healthy 40 m m or more but actually depresses it. If a few drops of this solution is instilled into one conjunctival sack, the pupil is dilated or if over dilated already it is contracted.

8. The retina and pupil show many abnormalities. The pupils in active cases are dilated. The retina in severe cases shows atrophic spots with enlarged veins, and many minor disturbances.

## Correspondence

### CHRISTIAN SCIENCE

Chicago, Ill.

I am preparing a contribution, in book form, to a showing on Christian Science, dealing with the subject from the medical point of view.

Every physician has knowledge of cases wherein favorable results could reasonably have been expected to follow the timely use of proper medical or surgical treatment, but which, through reliance on Christian Science, resulted in serious injury to the patient.

The "story" of such cases, told by representative physicians in language that will be fully understood by lay readers, will appear in the forthcoming volume.

I shall be under great obligation to any members of the medical profession who will favor me with assistance in the matter.

There will be no undesirable publicity, as no names will be published. Your communication, doctor, will be held strictly confidential.

With appreciation of the favor I am asking,

I am cordially yours,

CHAS. E. HUMISTON, M. D.,

449 N. Central Ave.

### DIDN'T HAVE THE MONEY

Returning from the dentist's where he had gone to have a tooth extracted, little Henry reported as follows:

"The doctor told me 'fore he began that if I cried or screamed it would cost me 75 cents, but if I was a good boy it would only be half a dollar."

"Did you scream?" his mother asked.

"How could I?" answered Henry. "You only gave me half a dollar."—Laffodontia.

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The proposed campaign cannot be prosecuted without funds; it must be supported by popular subscription. It is hoped that every doctor will subscribe to this worthy cause. Serious disease diverted from the incompetent will result in the saving of thousands of lives and will prevent much permanent invalidism.

This campaign will achieve two great objectives: A gradual, but ultimate restoration of the medical profession to its merited place in the public sympathy and confidence and the inestimable benefits to humanity through the consequent prevention of disease and the preservation of life.

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Please sign and mail to the Illinois State Medical Society.

To the Officers of the Illinois State Medical Society and Members of the Council:

"I am in accord with the proposed newspaper educational campaign in the press of Illinois, unanimously adopted by the House of Delegates of the State Society at the 1922 meeting and the plan recommended by the Council of the Society, and as evidence of my desire to co-operate with the Officers of the Council and of the State Society, I hereby enclose my check for $.....to aid in defraying the expenses thereof:

MAKE CHECKS PAYABLE TO THE ILLINOIS STATE MEDICAL SOCIETY.

Name.....M. D.

Street .....

City..... County.....

Sign the above pledge card, make out a check payable to the Illinois State Medical Society and

mail both in an envelope addressed as follows:

From

.....

.....

.....

ILLINOIS STATE MEDICAL SOCIETY,
c/o Cashier, Sheridan Trust & Savings Bank,
4738 Broadway,
Chicago, Illinois."

25 E. Washington St.,
Chicago, Ill. Lay Publicity Committee.

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## Original Articles

# VENTRICULOGRAPHY*
# ITS PLACE IN BRAIN SURGERY

GEORGE L. DAVENPORT, M. D.,
CHICAGO

Ventriculography or cerebral pneumography is the replacement of the cerebrospinal fluid with air, in order to make the outlines of the ventricles and passage ways of this fluid distinctly visible on the Roentgen plate. To W. E. Dandy[1] is not only due the credit for the introduction of this procedure, but to a large extent, the clinical application thereof.

We have applied this procedure in 28 instances of intracranial lesions and feel there has been added to our armamentarium of already known methods of diagnosis another method of precision.

In the ventricular injection of air we enter the ventricle through a burr opening or the open fontanelle in the infant's skull, at Kocher's point of election on the right side, with the patient lying prone, neck flexed and looking towards the left, puncturing through the frontal lobe. The needle point enters the anterior horn or at its junction with the body of the lateral ventricle.

A record syringe with a two way petcock is then joined to the needle after removing the obturator, and the ventricular fluid is removed gradually, 5, 10 or 15 c.c. at a time and replacing same by air before the withdrawal or more fluid is begun. This is repeated until no more fluid can be withdrawn, when the needle is removed and the scalp sutured.

In order to secure good pictures it is necessary to at least empty the contents of one lateral ventricle or preferably more. Following the technique described above we have always succeeded in getting a satisfactory evacuation.

The procedure is carried out under local anesthesia and while the air is being injected the patient is watched continually and asked from time to time if he feels comfortable, because when the replacement of the fluid by air is done too rapidly there is occasionally noted a dizzy or faint feeling. After the injection of air has been completed the head is kept slightly higher than the body level by placing a pillow under the head.

In two instances of ventricular injection of air we found the emptying of the ventricles was a "compulsory gradual emptying." These were cases of extensive gliomas involving the occipital and parietal lobes; there was interference with the ready flow of fluid from one ventricle into the one on the side that was being emptied due to a partial closure of the foramen of Monro as a result of displacement by the tumor or edema about this opening. Thus if this ventricle which was entered was very much smaller, one obtained a very small amount of fluid and due to the partial obstruction, drainage from the other ventricle was slow and emptying it took a considerable time.

The total quantity of fluid removed will help in gauging the size of the ventricles. The simple use of the diagnostic ventricular puncture and the obtaining of a large quantity of fluid which indicates dilated ventricles, may favor the diagnosis of a posterior lesion. In one instance we had a tumor of the frontal lobe displacing the ventricle on the tumor side, yet in this case the ventricles were dilated, furnishing over 60 c.c. of fluid. There was present either enough subarachnoid obstruction due to increased intracranial pressure preventing absorption of the fluid or there was a double lesion present, a frontal tumor with a lesion of the posterior fossa.

Routine Wassermann tests and microscopical examinations are carried out on all ventricular fluids removed, thus excluding the employment of spinal puncture, which is dangerous in cases of brain tumor especially if located in the posterior fossa.

The x-ray pictures should be taken soon after the air injection has been completed before a great deal of the air becomes absorbed or dispersed. This is imperative when only a small quantity of air could be introduced.

Four views are usually taken with the vertical ray, two laterals, an antero-posterior and a postero-anterior. In the lateral views the distance from the target to the plate is 66 cm., in the antero-posterior and postero-anterior the distance from the target to the plate is 61 c.m., these distances are maintained in all our work so as to

*Read before the Illinois State Medical Society, May 16, 1923, Surgical Section, at Decatur, Illinois.

give us a relative exactness as to the size of the ventricles in each case.

In the lateral views with the sagittal plane parallel to the plate, right side of head down, the ventriculogram reveals a picture of the left lateral ventricle and vice versa. In the antero-posterior view the frontal region is nearest the target with the sagittal plane at right angles to the plate, ventriculograms reveal a picture of the anterior horns. In the postero-anterior view the occiput is nearest the target and the sagittal plane at right angles to the plate, the ventriculograms reveal a picture of the posterior and descending horns.

All plates should be carefully marked and the time of exposure is the same as for any head picture bearing in mind the fact that the skull of an infant is penetrated easier and the time of the exposure is much shorter than for the adult skull.

Townee[2] recommends the taking of four additional views of the fluid levels, using the horizontal ray. Two lateral views, one with the occiput up and another with the frontal region up, also two antero-posterior views first with the right side up and then the left. These additional pneumograms add information to our composite in arriving at a definite interpretation of the findings.

The intraspinous injection of air recommended by Dandy[3] in addition to revealing all intro-cranial passages, may be of valuable service in early hypophyseal lesions. The technique is quite similar to the intraventricular injection of air always maintaining the head of the table elevated 15° until after the pictures are taken. This procedure is of special value in localization of the obstruction in the communicating types of hydrocephalus, but is contraindicated in cases of brain tumor located in the posterior fossa.

One should never arrive at a diagnosis from the x-ray findings alone, which point holds good for all laboratory methods of diagnosis. A correct diagnosis and localization of the intra-cranial lesions is based on a careful history, through examination and observation of the patient and last the interpretation of the x-ray findings following the ventricular or intraspinal injection of air.

The interpretation of the x-ray findings requires a complete knowledge of the technique of the ventricular or intraspinous injection of air, position of the head, total quantity and difficulty with which the fluid was removed. The x-ray findings include such displacements of the ventricles which are brought about by tumors and cysts when allowance is also made for edema near a tumor or in remote areas; in cases of hydrocephalus a knowledge of the various areas and points of obstruction and lastly a careful opposite side comparison.

Indications for cerebral pneumography are:

1. In cases where a tumor could not be localized by other means.
2. In cases operated on and no tumor found.
3. In cases in which secondary manifestations were so pronounced as to completely overshadow the early clinical symptoms which results from a general pressure phenomena, displacement or edema.
4. As a corroborative procedure when it is necessary owing to the fact that the clinical history, the examination of the patient and observation had not been conclusive enough to aid in the localization of the tumor.
5. To gain information as to the size and extent of the tumor.
6. Cases of hydrocephalus in determining the site or region of the obstruction which caused this accumulation of fluid.
7. Localization of the origin of a tumor as in the case of brain tumor existing for some time suddenly developing typical Jacksonian epilepsy which may result from either extension, pressure, hemorrhage or edema, and yet the tumor may originate in the extreme frontal region, sub-cortical or post-parietal areas. This permits of the opening of the skull directly over the tumor rather than a wide opening over the motor region often far removed from the tumor.

We are all agreed that any diagnostic-method of procedure should be made as safe as possible. Up to the present time we have utilized this method in 28 cases of intra-cranial lesions without a death that can be ascribed to the operation and only in four instances were there any untoward manifestations. In one case while the air was being injected the patient complained of dizziness, in the other three there occurred within an hour after the operation, slight pallor of the skin, dizziness, nausea and vomiting. The only treatment instituted was to keep the patient

warm and the head high, when these symptoms passed off in a short time.

It is possible that serious results can occur from hemorrhage into the ventricles, by air embolism, by a sudden reduction in the intracranial pressure, or by a sudden increase of the intracranial pressure thus causing an acute increase of the latter which might cause the rupture of a weakened stretched blood vessel or the sudden disturbance of a vital center in the brain.

Operative treatment when instituted confirmed the previous pneumographic findings. Of the 28 cases of cerebral pneumographies reported eleven were subsequently operated upon with nine deaths resulting from within a few hours to seven months thereafter. Thus in this small series of cases a mortality of 89% resulted.

The operative results must not be judged only by the remote results and their mortality but also should be taken into consideration that even a temporary result saves the patient exquisite suffering and blindness.

With the introduction and careful use of this procedure it seems only fair to assume that our selection of cases and end results in brain surgery cannot help but improve.

Dr. Davenport showed several slides of cases he had operated on to substantiate the points he had made.

1. Dandy, W. E.: Ventriculography following the Injection of Air into the Cerebral Ventricles. Ann. Surg., 66:5; July, 1918.

2. Townee, E. B.: The Value of Ventriculography in Localization of Intracranial Lesions. Arch. Surg. 5:144; July, 1922.

3. Dandy, W. E.: Roentgenography of the Brain after Injection of Air into the Spinal Canal. Ann. Surg. October, 1919; p. 397.

## NINE YEARS OF CLINICAL RESEARCH IN THE TRACHOMA PROBLEM*

EDW. E. EDMONDSON, M. D.

MT. VERNON, ILL.

More than nine years ago, at the solicitation of Dr. Oliver Tydings, I commenced the clinical study of trachoma, largely in Southern Illinois, to some extent in the Government Hospitals in Kentucky, and to a still less extent, in the largest clinics of the Rocky Mountains.

There was some suspicion in Dr. Tydings' mind that trachoma was in some manner a manifestation of tuberculosis and to a study of the relationship of these two serious diseases I addressed my attention by making such tests for the presence of tuberculous lesions, such as Pirquet test, Calmette reaction, hypodermic reaction, and clinical history and physical findings, but to all these there seemed to be no case in which there was the slightest exacerbation of the trachomatous manifestations, hence it was necessary to report a verdict of "not guilty". The two diseases were often found in the same individual but so far as I can see they are not related except by mere accident. In making a motor tour through the Indian Reservations of the Rocky Mountain States I found that the soil is characteristically dusty and that there are numerous dust-storms at certain seasons which most certainly irritate the eyes of the Indians and this fact may have much to do in the etiology of the disease among he Indians. In southern Illinois there are periods of dusty and dry alternating with fogs and prolonged dampness.

Let us omit the history and geography of the disease and apply the effort of the present paper to a study of how the disease manifests and how its various stages and sequelae may be satisfactorily cared for by the oculist, who, by the way, is the only person to be entrusted with the treatment of so serious an affliction in any stage or any complication.

Trachoma appears as a deep red conjunctival suffusion associated with the presence of the typical granular extrusions of the same color which bleed freely on slight pressure, to be distinctly differentiated from follicular irritation due to house dust, street or road dust and the flying chalk of the school room and should never be confounded with the engorgment of the palpebral conjunctivae associated with errors of refraction frequently found in school children. There are several misleading batches of statistics submited by pseudo-surveys recently made in this and some other States, one being a list of twenty-eight cases diagnosed by tyros as trachoma when a follow-up revealed that only two of these cases were even suspicious.

It is in this early stage of the disease that the embryo-oculist crowns himself with the discovery of hitherto unsuspected breeding places of trachoma, and frightens the teachers and parents into the belief that visual disaster is impending in that community.

The State of Illinois was unwittingly party to this character of ignorantly stigmatising many school children as trachomatous by a group of

*Read at the 73d Annual Meeting of the Illinois State Medical Society at Decatur May 16, 1923.

unqualified men and women making such a so-called survey only a few years ago in Southern Illinois.

There are certain institutions with the unsavory reputation for advertising "Cures for Granulated lids" using follow-up letters and pyrotechnic displays of heroic action in such cases of strain and dust irritation, with at times, some low grade conjunctival infection which are not much more charlatan in character than the bogus reports to the State through its University.

During 21 months service as oculist in Army duty, in recruiting inspections, in cantonment, and later as oculist for the largest Medical Advisory District in Illinois, I found many men discharged by S. C. D. and the specific disability stated as trachoma, when proper examination revealed not the slightest trace of the disease.

The etiology of trachoma is not completely proven, although much laboratory data has been done by Von Prowasek, K. Lindner, Morax and Ballak tending to the serious consideration of the "Free Initial Bodies" and "Inclusion Bodies" which when transplanted to the conjunctivae of monkeys produced typical trachomatous lesions whereas the inclusion bodies of epitheliosis desquamativa, vernal catarrh and swine pest when transferred have not produced the lesions of trachoma.

These bodies are also found in ophthalmia-neonatorum non-gonorrhoica and in the vaginae of the mothers and the urethrae of the fathers.

The symptoms which call for relief are usually met in the following order: irritation of the eyes, photophobia, sensation of foreign body in the eyes, ulceration of cornea, pannus, entropion, superficial or deep scars of the cornea, trichiasis and distichiasis, ptosis, lag-ophthalmos, symblepharon and xerosis of the cornea.

The sensation of foreign body, photophobia and irritation are relieved by the use of mydriatics, grattage of the lids and the topical application of a five or ten per cent. dionin ointment.

The granulations may be removed by rasp and roller forceps followed by grattage and some emollient, or by grattage with a swab of boric powder and also in the hands of some the use of a needle to prick the granular bodies, all of course under the influence of local anodyne. The needle method has seemed to me a failure, having seen several cases so treated by good men in St. Louis, but the cases slowly grew worse and I noticed the same progress of the disease as if the case had not been "needled" at all. The use of the rasp and expression has been attended with manifest success in all cases operated on in the extrusion stage of the disease, followed with a bichloride of mercury rub and the use of bland emollients. This also has the most direct effect in removal of pannus, of either the crass or tenuous type.

The cicatrices are best treated with dionin ointment or with thiosinamine ointment or a combination of both alternately every three or four days. These ointments can be started at five per cent. and after the eye no longer reacts satisfactorily with that strength, the use of ten per cent. can be substituted with advantage, and in many cases I have used as high as a twenty per cent. ointment to hasten the absorption of the exudate which nature had thrown out about the scar tissue and which the chemosis produced by the chemical will wash out, and it is gratifying to note how thoroughly some of the scar opacities will yield to the prolonged use of these ointments in many of the cases of trachoma.

The condition of ptosis and lag-ophthalmos is due partly to the thickening of the lids and partly to the shrinking of the conjunctival sacs with symblepharon and this whole group of symptoms belongs to the chronic stages of the disease.

Dionin and thiosinamine ointments have served me well in these sequelae, much better than the attempt to relieve them by carefully dissecting the adhesions from the lids or from the globe.

In the cases presenting xerosis of the cornea the same ointments have produced a succulence of the conjunctival sacs which by prolonged and patient use have relaxed the shrinkage and cleared the corneal dryness to a remarkable degree and in several cases still under my observation useful function of the eyes has been restored.

The operation for entropion of the lower lid consists of the classic one of doing a canthotomy and making a dual mattress suture from the cheek into the lower lid and retaining same till the scar tissue around the suture could be formed which would hold the lid everted.

The operation for entropion of the upper lid differs in what appears to many to be an important principle from the classic one.

No part of the lid is removed, an incision

parallel to and about three millimeters above the line of the lashes is made through to the tarsal plate, the upper flap is dissected upward to the upper border of the tarsal plate and the lower flap is also dissected down carefully to and around the lower edge of the tarsal plate and upward on the inner side of the same for one or two millimetres after which the lower flap is sutured to the upper edge of the tarsal plate with five sutures and the ends of the sutures are drawn up above the eye brow and held firmly with adhesive tape for a period of five days. The result of the operation is to form a new and more nearly normal relationship between the tarsal plate and the line of lashes which immediately after operation forces the lashes into a vertical position and after the sutures are removed will gradually allow the lashes to assume a more horizontal position but in the cases I have operated there has never been a recurrence of the entropion.

The simplicity of this technique is apparent over the one in which the v shaped incision is made in the tarsal plate to allow the plate to assume a more everted position at its lower edge.

Without this dissection of the lower flap in the manner indicated above the rest of the operation would be a failure, as evidenced by the attempt by some others I have seen in the southern part of this State.

My conclusions after nine years of work with this disease are that it is not a disease that will recede and leave the patient in a normal condition if the watchful waiting method is employed in its control.

It is a disease that requires active treatment of an intelligent character to prevent further damage to the visual organ and its appendages.

There is an indicated treatment in every stage of the disease and the disease can be arrested in any stage in which it reaches the experienced oculist, and further progress of the disease reflects either of the capability of the Doctor or on the fidelity of the patient.

Trachoma is a disease which should receive the intelligent co-operation of the people, medical fraternity, state and national government for its control and eradication.

In the past the people have been told that there is nothing that can be done for them in this matter and they have gone to quacks and advertising institutions which have wrung from them excessive fees for treatment and in a very large percentage of cases have treated the simpler types of conjunctival inflammations under the guise of trachoma treatment to the commercial advantage of the charlatans and to the damage of the cases of real trachoma, until the real sufferers have felt the despair of Dante's mythical gate of "Leave all hope behind who enter here".

We should preach the gospel of cheerfulness to these sufferers and should be in a position to offer them actual help in this affliction or refer these cases to those who are able to arrest the disease in whatever stage it may now be, and to give the most intelligent care of the case for the restoration of such functions of the eye and its appendages as is possible with the present knowledge of the subject.

## DISCUSSION

(Abstract.)

DR. J. S. JOHNSON, Cairo, found this a very interesting question, having had fifteen years experience practising medicine in a vicinity that has had a great deal of trachoma with all the complications that go with it, from the simple acute conditions to enucleations.

The geographical situation of the disease seems to have nothing to do with it as in Kentucky and southern Illinois where there are a great many cases, as in the coal mine regions of southern Indiana, the disease was brought in by the foreign laborers who are employed there.

In the public schools of Cairo we have discovered and treated more than three hundred cases of trachoma. There have been times when we have questioned whether they were all true trachoma. The three men treating it have questioned this but the cases had all the classical symptoms laid down in text-books. These cases were all treated by the method mentioned in the paper. Some of them recurred and were re-operated on. All the cases were followed up with after-treatment such as the Doctor mentioned,—some form of massage and drops into the conjunctival sac.

About a month ago we opened a children's clinic in Cairo and have found many of these children showing the symptoms of true trachoma, and some of the cases in which we had hesitated in deciding whether they were true trachoma or folliculitis. In Cairo there are some 3,000 white school children. In 1918 a few cases of trachoma were reported by the school nurse at the end of the year. At the end of 1919 sixty cases were reported and during 1920 there were 150 cases of the disease. Nothing had been done by the authorities to eliminate it, but at that time the health authorities got busy and began to eradicate the disease. That was a rapid increase from year to year of an infectious eye disease with all the clinical symptoms of trachoma. In the same town we have something like 1,000 colored school children but up to date

we have never found a case of this infection. We have been taught that the Negro race has an immunity to trachoma and he had never seen a case in a full blooded African, and but one or two cases in the mixed breeds.

DR. FRANK C. HAMNETT, Princeton, recently returned from China where he had observed trachoma in and about Peking. This is a disease that attacks the Chinese very largely. They have a clinic at the Rockefeller Foundation in Peking of 250 cases. Dr. Howard, who has the work in charge, has been trying to find why the disease is so prevalent, but when one remembers that for six months there is no moisture in that vicinity, with a strong wind all the time picking up the infected dust that is so prevalent in China and forcing one to use a handkerchief constantly to keep the dust out of the mouth and eyes, this will give you some idea of the reason for the great prevalence of trachoma in that country. They have tried the blue stone, silver nitrate stick and the light in the treatment of the disease but they now use the potassium permanganate and boric acid swab.

He acquired trachoma while in the northern part of China, went to the Rockefeller Hospital and Dr. Howard diagnosed a mild case of trachoma and he underwent the routine treatment. That treatment is not pleasant but probably is not so bad as the blue stone or silver nitrate. The swab is dipped into a solution of potassium permanganate, about 1:1000 solution, quite a dark solution, and then put into the boric acid powder, the eye being first cocainized which requires about half an hour. Then the lower lid is rubbed, probably six times across and with a boring motion into both canthi, and then they lift the upper lid and place the swab underneath and get it up into the fold, rubbing as on the lower lid. They then put on an ice pack for half an hour and after that the patient puts on dark glasses, and may go out into the sunlight. In addition to this the patient used ½ per cent zinc sulphate solution three or four times a day. This procedure gives relief an hour and a half to two hours after the treatment and the eyes finally get well.

There is a tremendous amount of disease in China but if one knows the Chinese it is easy to see why there is so much trachoma. They are very dirty and very little water is used, although there is plenty of it in the wells and rivers. One man came to his dispensary who had not had a bath in three years. They are also very likely to use towels or handkerchiefs to dust their shoes and then wipe their eyes with the same towel or kerchief. Not only do they have the trachomatous conditions there but many other eye conditions due to filth.

The treatments described are given three times a week, on alternate days and they are continued depending upon the state of the case. He was there for a month and received twelve or fifteen treatments but his case was not very severe.

Dr. C. F. Burkhardt, Effingham, thought there was probably no subject of more interest to eye men than the subject of trachoma and its successful treatment. It is perhaps true, as Dr. Edmondson stated, that it is a disease which can be cured but if he knows of any method by which we can hold a patient sufficiently long in private practice to cure them he would be glad to hear it. He cannot get these patients to go into a hospital or even come in three times a week for treatment. He referred to a secret method used in a neighboring city said by patients to be extremely painful but the most of them return home apparently cured; and he believes that in these cases we are not using a sufficiently strong solution of nitrate of silver. He had sometimes made the mistake of getting hold of a 25 per cent solution and was greatly alarmed, but found better results in these cases than he got with the weaker solution.

DR. HARRY W. WOODRUFF, Joliet, stated that trachoma is not only a disease of the conjunctiva but it seems to attack the eye from the lid margin going up to the cul-de-sac, and then again to the limbus and cornea. This area from cul-de-sac to limbus seems to escape the trachoma except in the cases ot atrophy, of course, where the entire conjunctiva may shrink. This is the location in which trachoma primarily does the most harm because of the fact that the tarsal plate is so intimately associated with the conjunctiva, and the disease after it exists for any length of time extends into the tarsal region so that you have an actual tarsitis, more marked near the ciliary border of the lid because the blood vessels run down from the circular artery of the lid and anastomose with the little vessels of the conjunctiva, and there we have the linear scar nearly always in trachoma, corresponding to the line of suleus subtarsalis.

Removal of the tissue down to the border of the lid and removing the entire tarsus, except the lid border, results in great benefit to the cornea because of eliminating the rubbing of the tarsus on the cornea. The pannus and resulting ulcers disappear and the deformity of ptosis, which is due not to the disease of the conjunctiva but more especially to atrophy of the fibers of Müller's muscle so that it loses its power and the lid droops.

DR. ROBERT VON DER HEYDT, Chicago, commended Dr. Edmondson's medical treatment. It is the same as was introduced by Dr. Beard and followed up by Dr. Barr and himself at the Infirmary. They use bichlorid 1-500 for rubbing the conjunctiva, changing a passive to an active congestion, and also use it in atropine vaseline, 1-3000 for corneal complications.

He also commended the idea of breaking individual follicles with the knife needle instead of doing an expression in cases where there are but a few; it is less painful.

DR. EDWARD E. EDMONDSON, Mt. Vernon, Illinois (closing): I wish to thank the gentlemen for their discussion. As to the use of dionin, we do not use it for any length of time. It is a good lymphogogic but if it is used much it loses its effect. I do

not use it every day, but perhaps once a week or once in two weeks or once a month, but to cause a relaxation of the conjunctival sac and clear up the xerosis and produce absorption of the exudate around the superficial ulcers of the cornea and the scars there, there is nothing better in my hands than dionin in a small percentage. It causes a chemosis and washing out of the exudate but it looks as if the hornets had stung the lid. That is my experience of nine years. I use the ointment because I have seen men use a solution of the powder and in a short time it is all gone. I use the ointment because it takes longer to get it out of the eye and there is a more lasting effect.

The removal of the tarsal plate I think is good surgery. The cases that come after the disease is of twenty-five or thirty years duration and the patients are practically blind because of the scars frequently will not submit to surgical operation and we sometimes have to do the next best thing. It is true that the tarsectomy gives excellent results in many cases.

I appreciate very much all the light on the subject of trachoma for I am working on this matter in real earnest.

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## THE VALUE OF THE X-RAY REPORT AS A LIAISON BETWEEN THE ROENTGENOLOGIST AND THE REFERRING PHYSICIAN*

EDW. S. BLAINE, M. D.

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CHICAGO

The purpose of any x-ray examination, observation or study is to aid the referring physician or surgeon in arriving at a diagnosis in such of his cases as may be proper subjects for roentgenological investigation. The x-ray viewpoint in a given case is but one phase of a complete study of a patient and does not constitute the diagnosis of the patient's condition. In only a few exceptional cases can the x-ray findings be properly considered as "pathognomonic" of a particular lesion, regardless of the clinical and other evidence and therefore in such instances is conclusive in establishing the final diagnosis. This, however, is of such infrequent occurrence that the careful physician should be very reluctant in accepting such x-ray findings as a final or conclusive diagnosis if it has little or no clinical support. The x-ray report should be considered an aid to the diagnostic end and not the final diagnosis itself. (Incidentally the term "x-ray diagnosis" is really a misnomer and its use should be discouraged in every day practice.)

The value of an x-ray examination lies in the manner in which the maximum information obtainable from the x-ray shadows, resultant on proper exposure and development technique, is delivered to the physician interested. This transfer of information is made in the formal x-ray report and, therefore, this report is literally the "liaison" between the roentgenologist and the referring physician or surgeon. The x-ray report is a statement of the roentgenological aspects of a given case and preferrably should be typewritten over the signature of the roentgenologist who makes and who is responsible for the interpretation. There should be no debate on the proposition that the roentgenologist necessarily must be a graduate in medicine, properly qualified in the x-ray specialty. It is a sad commentary on the action of some physicians and surgeons who still refer their patients to lay x-ray operators and who rely on x-ray reports made by non-medically trained individuals for assistance in the handling of their patients. The day is approaching when the roentgenologist will no longer be rated on the photographic beauty of his x-ray films but on his skill in evaluating the x-ray shadows in terms of normal tissues or of pathological lesions, as well as his ability to transfer the diagnostic significances of these shadows to the referring physician via the x-ray report. Correctly speaking the patient's fee is for the *x-ray report* and not for *x-ray pictures* per se, the films being but the evidence on which the report is based and these films occupy a similar position as does the x-ray machine, x-ray tube, etc., and in like manner as does the stethoscope, the microscope and similar diagnostic aids used by the physician. The operative findings and post-mortem revelations are the proper methods of checking up on the skill and accuracy of the roentgenologist and should not be based on the attractiveness of his x-ray "pictures" as is so often the case.

A prominent pathologist who is performing a considerable number of necropsies has expressed his interest in the fact that between the clinical conclusions by the ward physicians and the x-ray findings given by the roentgenologist, the x-ray reports were found to be the more often correct and the roentgenologist more frequently made an accurate estimation of the actual pathology

*Read at the annual meeting of the Illinois State Medical Society, at Decatur, May 16, 1923.

which he (the pathologist) found to be present.

A good x-ray report will so describe the abnormal shadows in degree, location and extent that a mental picture of the x-ray plates will be obtained which can be translated into pathological changes and which can be diagrammed on paper and a comparison of the resulting sketch with the film shadows will reveal the same information in terms of gross alterations or departures from normal. The report must not be too voluminous and yet not so brief as to sacrifice any essential information. If the shadows be analyzed on the premises hereinafter set forth, the report will have exactly the same value in New York and San Francisco as it has in Chicago or anywhere. This method of reporting reduces the necessity of the referring physicians having to "see the x-ray films" for themselves, now a rather prevalent custom, due largely to the lack of proper standards of x-ray reporting.

The x-ray report, being primarily for the referring physician or surgeon, may be considered from two different angles, namely:

First, reports for the doctor who is himself skilled in x-ray interpretation but does not use x-ray apparatus, and

Second, reports for the doctor who does not know the x-ray shadow values in terms of pathology.

From a practical standpoint, an x-ray report which fills the requirements of both first and second situations (a combined report, as it were) is logical. Thus the shadow variations on which the diagnostic conclusions are based are detailed and described in the report, and, in addition, the roentgenological indications are given as a résumé. If the objective shadow findings do not interest the physician he can easily disregard the first part of the report and consider only the x-ray conclusions. If, on the other hand, he does not care for the roentgenologist's opinion as to the diagnostic significance of the shadows, he may concern himself only with the objective shadow findings.

Under the first mentioned viewpoint the process of x-ray reporting is merely a technical one and consists of a word picture of the gross appearances of the shadows normal and abnormal. The careful diagnostician will make for his files a detailed report or analysis of the objective x-ray shadow features normal and abnormal just as he does the other clinical features of his case.

In order to be able to recognize x-ray shadow variations there is required *a priori* an accurate knowledge of the relative densities of normal and diseased tissues as well as the x-ray manifestations of such normal and diseased tissues. From a careful description of the shadow features normal and abnormal which are detailed in the x-ray report, the referring physician, possessed of x-ray training in shadow analysis, should be able to make a proper deduction as to the pathological indications of the shadows described in the report.

Under the second viewpoint an *x-ray consultation* takes place in like manner as occurs in a bedside consultation except that the patient goes to the roentgenologist instead of the doctor going to the patient. The conclusions are based on the x-ray shadows and these are given in the written report which is sent or given to the referring physician. In the strictest sense this does not call for a description of the shadow changes themselves, but only the pathological or non-pathological indications. However, for reasons already stated a combined report has by far the greatest possible value as a consultation. All x-ray reports cover either traumatic or non-traumatic cases.

*Preliminary Details.* A good x-ray report regardless of the lesion will contain the following items of information concerning the technique used on which depends, in considerable measure, the value of the examination:

1. a) The exact anatomical regions included in the x-ray exposures, giving the limits in terms of anatomy.

b) Whether right or left, or both.

2. a) The projection directions of x-ray made in the examination, e. g., AP—PA—lateral, etc.

b) The posture of the patient, e. g., supine, prone, right lateral, etc.

c) Number of exposures made.

d) The number of films used.

e) The size of the films.

3. a) Whether the shadows of the bones correspond with the age, weight, height and sex of a normal individual of like age, etc.

b) Main shadow features which bear directly upon establishing the lesion suspected by the referring physician.

c) Secondary or additional changes observed.

4th. A specific statement as to the normal portions included in the examination.

The report must be specific on each point and should leave nothing to be taken for granted or assumed as unimportant. Often the shadows of apparently the least significance proves to be the most valuable.

*Injuries.* If the case in question be one of trauma, the following points are to be specified in detail in the x-ray report:

a) Type of injury, such as fracture, dislocation, subluxation, periosteal tearing, etc.

b) Name of bone involved, (e.g. humerus, fibula, etc.)

c) Location of injury (e.g. "at junction of middle and lower third").

d) Kind of fracture, (e.g. transverse, spiral, comminuted, etc.)

e) Extent of fracture in centimeters (or inches) of length of bone.

f) Direction of line of fracture (e.g. "from external aspect, downward and inward") (always beginning from proximal to distal).

g) Position of distal fragment with relation to the proximal one.

h) Amount of end to end opposition in percentage, (e.g. 100%=complete, 50%=half and half).

i) Amount of over-riding, (i.e. shortening, preferably stated in centimeters).

j) Angulation of fragments (if any) in degrees off 180°. Thus, "10° inward angulation", "25° forward angulation", etc.

k) Whether the injury extends into the neighboring joint or not.

l) Whether shadows indicate old or recent bone injury.

m) Presence and approximate amount of callous shadow, if present; absence of same should be so stated.

n) Whether there is indication of infection of periosteal, articular surface or underlying cancellous or cortical bone tissue.

o) If metallic fragments indicate a projectile injury,

p) Together with any additional features such as evidences of bone atrophy, arterio-sclerosis, soft tissue alterations, myositis ossificans, etc.

*Diseases.* An x-ray report of bone or joint pathology will cover the following points:

a) The anatomical regions (right or left or both) included in the exposures.

h) Whether the shadows of the anatomical structures coincide with the age, weight, build and sec of patient.

c) The parts which are represented by shadows of normal anatomy.

d) The parts which are involved in abnormal changes.

e) Whether change present is epiphyseal or diaphyseal, or both.

f) Whether there is bone increase or decrease, or both.

g) Whether same is one or more or on all sides of the bone.

h) Whether the changes are in the cortex or medulla, or both.

i) Whether change is periosteal only or combined with underlying bone change.

j) Whether a small and localized or a large diffuse extensive involvement is indicated.

k) The roentgenological conclusions or indications stated in order or probabilities unless the x-ray evidence be pathognomic or conclusive or if a preponderance of evidence indicates a particular lesion to the exclusion of all other diseases.

## THORAX

An x-ray report of a study of the thorax will include pulmonary, pleural, cardiac and aortic shadows as seen by fluroscopic screen and stereoscopic or plain film as the case may be. The report will state the number and size of films used as well as note the position of the patient in the preliminary portion of the report. This statement of technic used is of prime importance as it signifies just what the findings are based upon which must be consistent with the known possibilities of such examinations.

In analysing the shadows of the thorax the following order is logical:

*Pulmonary.* The lung fields are preferably divided into the following areas for convenience in reporting:

a) apices, 1st, 2nd, 3rd, 4th, etc. interspaces, anterior and posterior, right and left.

b) upper, middle and lower third, right and left.

c) costophrenic angles, right and left.

d) cardiophrenic angles, right and left.

e) peripheral, intermediate and hilum regions, right and left.

These divisions will permit an accurate description of any unusual shadows in any portion of the lung fields and thus enable a proper evaluation of their significance.

Shadow increases (or decreases) from average normal for the same size, age, weight, sex of the individual examined will be stated and located. The condition of the apices as to lighting, the activity of the diaphragms, the excursion of each as compared with the other, the movement of the lateral chest walls on deep respiratory action will all appear on a proper x-ray report. The extent and degree of shadow change will enable the referring physician to better appreciate the actual condition of his patient, if these be properly expressed in the report. This objective shadow description will be followed by a resume in which the probable pathological significances will be given.

*Pleural.* Next in order to report is the condition of pleural areas, as to increased shadows indicating thickening, effusion, adhesions, etc., decreased shadows indicating emphysema, cavitation, etc. The pleural regions are conveniently divided into costal and diaphragmatic borders, costo- and cardio-phrenic angles, right and left, all of which should be specifically referred to as being normal or abnormal as the case may be. The pathological significance of any abnormal shadows will be stated if they be characteristic of certain lesions.

*Cardiac and Aortic.* The heart shadow is found to be normal or abnormal for the age, weight, build and sex of the particular individual examined. If the heart area is increased or decreased in size, the report will state the approximate percentage of such increase or decrease. If the configuration be abnormal the variation will be stated in terms as elongated, rounded, drop shape, asthenic or sthenic, etc. If suggestive of a valvular lesion the particular type will be stated, such as aortic regurgitation, mitral insufficiency or other condition indicated. If the outline be such as to be inconclusive, this fact will be stated. If the cardiac shadow be displaced, the degree of shifting and direction of same will be described as this is an important item from a diagnostic standpoint. The aortic shadow will be described as normal or abnormal as the case may be. Increase or decrease in size and shape is very important as a detail and must not be omitted. If there be shadow indication of aneurism this will be stated and the type of aneurism will be specified, such as sacculated, cylindrical or fusiform and the report will detail the location of such increases in diameter. Displacements of the aorta are also to be a part of the record as well as notations of calcified vessel walls if present.

## ALIMENTARY TRACT

The x-ray report of a study of the alimentary tract (or any portion of same) will state whether it includes one or more fluroscopic observations and how many and what size serial films were made in order that the foundation of the report can be established. The report should state the technic as to various postures of patient.

*Gall Bladder.* The careful roentgenologist will make a preliminary series of exposures of the gall bladder region and his report will state whether or not there were found any ring-like shadows which indicate the presence of gall stones, also being careful to state that the absence of such shadows does not rule out a cholelithiasis.

*Esophagus.* The x-ray report of an examination of the esophagus should specifically state whether the swallowing of the opague test material revealed normal or abnormal shadows on fluoroscopic observation. If found to be normal a specific statement to this effect is essential; if abnormal shadows were seen, the report will describe the alteration noted, increases or decreases of diameter being important information; if a narrow lumen is seen, the character, (smooth or ragged) and degree of the obstruction, location of same, whether in the upper, middle or lower thirds of its length will be described and the shadow indications as to whether diverticulum, spasm, benignity or malignancy or other lesion is evident will be noted in the report.

*Gastric.* The x-ray report of an examination of the stomach will state the fluoroscopic and film findings as to its a) size, whether small, medium, large or very large, b) its shape, such as vertical-fishhook, transverse-cow-horn or other suitable descriptive term and c) its position, whether high, normal or low in abdomen, d) its peristaltic wave characteristic in terms of vigorous, weak, regular or irregular and its motility,

noting its clearance at from four to six hour observations, e) the size of opaque residue, if any, whether small or large will be stated. A statement of the presence of a filling defect, whether this be an increase or a decrease from normal contour, and whether such increase or decrease be smooth or ragged, its location as to being in cardiac, median or pyloric portions and the extent of such increase or decrease are all necessary items for the report. If there be any evidence of the passage of the opaque material through a gastroenterostomy it should be specifically stated in the report.

*Duodenum.* Inasmuch as the histological makeup of the first portion of the duodenum (the bulbus duodeni) is quite similar to that of the pyloric end of the stomach, the report may properly group these together. The report of the shadow findings in the bulb or cap will include similar items as given in the preceding and, whenever possible, points of interest in the remaining or villous portions (second, third and fourth) of the duodenum will be described. If normal, it should be so stated. If pain or tenderness on palpation under fluoroscopic control be elicited, the relation of this pain point to the pylorus, gall bladder, etc. should be stated to aid the referring physician.

*Jejunum and Ileum.* In jejunum and ileum, the important items to be included in the report are the indications of obstruction, diverticuli and stasis as well as evidences of extrinsic displacement and congenital variations. If normal features are evident, this should be stated as being normal. In the event that the appendix be visualized, the character of its filling, position and whether fixed or tender will be described, all of which should be a part of a truly valuable x-ray report.

*Colon.* At eighteen to twenty-four hours after an opague test meal, the colon will be more or less filled. The x-ray report will describe the manner of filling, the condition of haustral markings, position of the various portions as to being normal or abnormal, ptosed, etc. The presence of fixation or immovability of the cecum under fluoroscopic manipulation, any tenderness or pain over the appendix, and x-ray indications as to the probability of appendiceal disease will be included in the detailed findings. If the colon be studied alone (by clysma) the report will so state and the number of films, size of same, posture of patient, direction of x-ray, will be given. The manner of inflow of the opaque enema is carefully noted in the description of findings. Note will be made of ileocecal valve competency or incompetency. The presence of diverticuli (best demonstrated at 48 to 54 hours post cebum) indications of spasticity of the colon, evidences of spastic, ulcerative or mucous colitis, intrinsic obstructions, filling defects, whether smooth or ragged, the presence of a redundancy of any portion of colon and the displacements by extrinsic lesions and the condition of the shadow of the rectum are all to be specified if the report is to have greatest diagnostic value. The findings of observations made from 24 to 72 hours will be given in properly noted paragraphs. A resume giving the probable pathological indications of the x-ray findings will complete the report.

## URINARY TRACT

An x-ray report of an examination of the urinary tract will be prefaced by a statement as to the details of technic such as number and size of plates, areas included, whether stereoscopic or plain, whether moving (Potter) grid was used and posture of patient. The referring physician or urologist will thus know how thoroughly the technical work was performed and will have confidence in the report accordingly.

*Renal.* The report will describe in detail the shadow appearances of the right kidney and the left kidney as to whether the outlines of such organs are visualized or not visualized, the size, shape and position of each, whether or not any unusual shadows are found to be intrinsic or extrinsic and the probable pathological significance of such shadows, as for example renal calculus, tuberculous calcifications, tumor, etc.

*Ureteral.* Next in order to report are the ureteral areas which can be divided into upper, middle and lower thirds, stating the presence or absence of unusual shadows. A description of the size (in centimeters if possible) the shape and the position of the shadows will be made, stating their probable significance.

*Bladder.* The bladder region is to be similarly analysed and described in detail, noting also the presence, if any, of phlebolith shadows, arterial calcifications, etc., describing the size and position as nearly exact as possible. This will be followed by a statement as to the shadow features of the bones and joints of the spine

and pelvis, noting any evidences of spinal arthritis, congenital variations or other departures from normal and the probable significance in terms of pathology.

*Opaque Injection.* After the preliminary statement as to technique used the report will note the name of the cystoscopist who performed the uretral catheterization and opaque injection. The report will describe as in the preceding, the various shadow features normal and abnormal together with the amount and kind of opaque material injected into each kidney (given by the cystoscopist), the shape and size of area of the renal pelvic shadow. The probable pathological significance of each pyleogram will be stated if abnormal; if normal in appearance this will be so stated. The shadows of the opague material in the ureters, right and left, will be described as to whether normal or abnormal in size, course and appearance, giving the probable pathology as seen from the x-ray viewpoint.

## SINUSES.

An x-ray report of an examination of the nasal accessory sinuses will state the number and size of films exposed, the positions of the head and direction of the x-ray beam. The shadows of the several sinuses will be described in order as follows: frontal, ethmoid, maxillary and sphenoid. A description of the frontal cells will note the size, shape and symmetry or asymmetry of outline, congenital absence of one or both sinuses, the presence or absence of clouding of one as compared with the other or with normal transparencies stating the probable significance of any unusual shadows. If normal in appearance this will be stated. The right and left ethmoid transparencies are described in terms of normal or abnormal conditions and are so noted. The antra are similarly considered and described in minute detail in the report. Shadows indicating the presence of products of infection, polypi, mucoceles, etc. are detailed specifically as to whether diffuse as in fluid (pus) or are sharply bordered with rounded upper or lower edges as in tumor, and comparisons are made of one side with like area on the other side as to degree of x-ray transparencies. The sphenoids are described as to size, shape and symmetry, note being made of septal deflections, etc. and indications of pathology detailed.

## MASTOIDS.

The mastoids are treated in like manner as already noted as to preliminary notation of films, positions, etc. The shadow evidences of the character of the cellular arrangement, their extent into the squamous portions of temporal bone, relations of the cells to the lateral (venous) sinuses and specific notations will be made and details given as to whether the mastoid cells are of normal or abnormal appearances, describing in what way they are not normal, such as hazy, fuzzy, poor detail of intercellular walls, olss of normal pneumatic content, etc. The indications as to the probable pathology present is then noted. It is only from such a detailed report that the sinus specialist will obtain maximum assistance in the consideration of his cases and his confidence in the x-ray is increased by this method of reporting.

## SKULL.

An x-ray report of a study of the head will describe, in addition to the necessary notations as to size, number of films, whether plain or stereoscopic and the several directions of x-ray projections, posture of patient, the x-ray shadow features normal and abnormal. The analysis should describe first cranial vault noting the shadow appearances of the inner and outer tables, increases or decreases in thickness, local or general alterations, peculiarities of shape if any, blood vessel markings, condition of sutures, whether indications of intracranial pressure are present, lines of fractures, the kind and extent, if any, tumors or other abnormality. Then should follow the base shadows which will be described, noting the conditions of anterior, middle and posterior fossae as to whether normal or abnormal features are present. The size, shape and appearance of the sella turcica will be stated together with the probable pathological significance of any variations discovered. The shadow appearances of the mastoid cells whether normal or abnormal will also be noted. If the pineal body be calcified this will be clearly seen and should also be a part of the report even though the significance of such calcification is not known. Obviously any shadows indicative of intracranial pressure (digitation) will also be

detailed; notations as to the shadow appearances of the bones of the face, jaws, and teeth will be made whether normal or abnormal as well as the upper cervical spine, in so far as these vertebrae are included on the films.

SUMMARY

The value of any x-ray report depends entirely upon how well it transfers to the referring physician all the information contained on the films. How well this is done depends upon the ability, experience and skill of the roentgenologist in x-ray shadow analysis or dissection as it were.

Systematic reporting a findings as detailed in this presentation is the exception and not the rule and when such thorough analysis is generally adopted by roentgenologists the value of the x-ray as an aid in diagnosis will be greatly enhanced and will rise higher in the esimation of the medical profession.

When the system of x-ray reporting here presented is adopted the loss of the x-ray films will not be the serious matter that it now is. Destroyed x-ray plates or films can never be replaced but if the report or a duplicate of it be filed, as it should be, in the records of the x-ray department, the need for the films for reference in following the progress of a given case, in research studies, in medico-legal cases, etc. will be reduced to a minimum.

Having such detailed descriptive reports will also reduce the desire of the referring physician or surgeon to see the films for himself. If the report gives all the available information, viewing the films will not add anything and the physician will not need to see them. The practice of "seeing the x-ray pictures" reflects the fact that x-ray reports as now made do not convey to the referring physician the x-ray findings which is partly the basis of this essay.

The lack of uniformity in x-ray reports, many of which are meaningless or inadequate, has been recognized by careful observers and attempts are being made to bring about a more satisfactory manner of reporting x-ray findings. It is on this score that this paper is offered as a contribution toward that goal of standarization of x-ray reporting so much desired by all concerned.

## LEGISLATURE MATTERS*

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I have a statement to make tonight, which also will be a report that is predicated upon what may come and not what has been. I don't want to inflict anything on you that I may repeat this evening—one or two points may be of interest.

Our position is a most peculiar one in Springfield in that we do not have the personal contact with our own profession, so to speak, as we do with the legislators, due naturally to the geographic position, so we must carry on through the mail and through every possible avenue to get to you gentlemen, so that you may interview the legislators of your district. My position, and the position of your legislative committee is merely relative—we are the liaison between the Illinois State Medical Society and the Legislature. We attempt to keep you informed as to what is going on and we believe the battle is won not in Springfield but back home, and just from hearing these gentlemen talk I could almost visualize to you, if I had the time, exactly which districts are responding and which are not. I am not prepared to bring any particular condemnation upon any specific county society because there has been no vote of record on our legislative programme as yet. The battles have been committee battles, one or two little measures that have gotten out and rambled on the floor of the Senate and the House which only shows how easily it is to get something passed which has no opposition from any source such as the Chiropodists' Bill.

Early in the legislative year we attempt to get a mailing list of the members interested in legislative matters, we have to revise it almost every week, and in that way attempt to get a legislative committeeman in every county. We have a mailing list of 250 to 300 and send a printed bulletin out as often as changes in the situation warrant. Sometimes we do not dare send out a bulletin because before it can reach you the aspect has changed entirely. In obtaining our original list of committeemen that desire to co-operate with your legislative committee,

*Extemporaneous speech given before the Secretaries' Conference, Illinois State Medical Society, Decatur, May 15, 1923.

we send out a questionnaire regarding the legislators and as a result we have each senator and representative tabulated in our office, and we have quite a little history about him. Sometimes I show one of the gentlemen his record thus obtained and he ofttimes compliments me on the ability of my detectives; we have their church affiliation, their standing in the community, etc. We have a map on which every legislator is designated; if he is right on medical matters he gets a blue tack, if he is a bolshevik he gets a red tack; those we do not know about, that is the greater majority, I regret to say, get a yellow tack. If I were a representative or a senator I wouldn't care to have you come to me and ask me to vote for a Bill that I have never seen and have no knowledge of its purpose. Committees analyze and amend these Bills, there is an amending session over there, there are a few over 1,200 bills introduced so far this year and just 31 have become laws. It is what they call a "Kill 'em" legislature. You can amend the multiplication table and get by with it.

A few weeks ago there was a Chiropodists' Bill started out to raise their requirements to four years high school and two years professional school. The second paragraph contained a great many things they proposed to teach. We did not pay much attention to it. It quickly passed the Senate because there was no opposition. That measure is now pending in the House. Naturally we got busy to see what they really meant by teaching Neurology and everything the medical man takes and saying they did not intend to practice it; but they covered it up by saying that they were only to take such an examination as was only necessary to be used in Chiropody. We found out that there were two factions; one was the better grade of Chiropodists, the other fellows were whatever they might be. We amended that Bill. We compromised by changing two words and raising two years high school to four years and one year professional education to two years, and threw the obnoxious second and third paragraph out of the Bill.

If we do not have an organized effort against pernicious bills of this sort many measures would at least get up as far as the Governor, then we would have to get busy and petition the Governor and it would be problematical as to whether or not he would veto the Bill. As it stood, nothing would prevent the man from giving a local anesthetic and taking a bone out of the foot—he wasn't going to do it, he says, but it is unnecessary to have laws of that sort; the danger is paramount.

We just had another instance a few days ago, inasmuch as a certain group of Homeopaths are making a pernicious lobby for a separate Board of Examiners. I did not want to inject that thought into this discussion, because I know there are many good Homeopaths, excellent members of this society, but I would say you had better look to your own skirts and see that your good name is not being sacrificed by an off-shoot of some brand of men who think they are not getting a square deal some place. We looked up the reason for this request of a separate Homeopathic board. A telegram came down from Chicago, a certain Senator wanted to know how many had been licensed as medical men, how many as homeopathists, etc. The Department of Registration and Education has licensed all told about 35,000 medical men of whom about 1,400 are homeopaths and 800 are drugless practitioners.

You are reminded of the proportion of drugless healers when you see the pernicious lobby of Chiropractors—and I speak of them as symbolic of the non-medical practitioner because the Osteopaths do study the human body and the Chiropractors do not. The Chiropractors make more noise down there with their less than 700 or 800. At a committee meeting when House Bill 242, our Medical Practice Act, was being considered, one of the Chiropractors said there were about 800 in the State. It reminds you of the fellow that was going to bring in a thousand frog legs, but he had misjudged their number by their noise, and instead of a great many as he supposed, there were only 12 or 14; so with the Chiropractors.

We will discuss at length this evening the pending Bills that are now before the legislature, that is the new Senate and the new House Bill. We will go at length into those two measures, and attempt if possible to have you decide as to which one is the most acceptable. We are trying to get them both as nearly together as possible, so there will not be many changes. We are very optimistic as to having this law passed.

The State House people are today taking all their time on the Veto Bill, and on the Hundred Million Bond Issue, and they will not get to many of these 1,200 bills pending this session. Dr. Nelson spoke about a lobby. I have always disagreed that we should have a big lobby in Springfield. I do not think the average legislator likes to be pan-handled for his vote. Up in Elgin they will do more good than if all the doctors of Elgin came down and sat in those seats and every time a representative got up from his chair he would be pounced upon.

The place to talk is back home. The Sheppard-Towner lobby has brought out hundreds of people, but if I am any judge, I am quite certain that that does not win a single vote; if it can not be done back home it can not be done at Springfield, and while we welcome, yes, invite everybody who has time and inclination for helping us, I always decry the idea that the Illinois State Medical Society should send a hundred doctors down there away from their business, to attempt to get any particular piece of legislation furthered. It is only a question of what we do back home, for two legislators have recently told me—and they are both good friends of the medical profession—"The doctors don't vote." After all, a politician is after the votes, and there are some things done thoughtlessly that hurt our cause. For instance, a prominent man of this Society went to his local senator prior to any of these Bills being introduced and said, "Are you going to vote for the Medical Practice Bill?" He said he would give it every consideration. The doctor then replied, "Are you going to vote for it?" He said, "I don't like to vote for anything I haven't read." The doctor said, "If you don't vote for it we will get you at the next election." That is not good politics.

I saw a letter the other day which said to a legislator, "We demand you vote for the Sheppard-Towner Bill." He copied the letter, he happened to be a luke-warm senator, and passed them out to his associates. If one of our letters could get as much publicity on the floor of the Senate as that letter we would have smooth sailing. Coercion is not to be depended upon. You must see the Senator back home, and arrange for a personal interview, also get ministers, lawyers, etc., interested in this fight, regarding the educational requirements for those who attempt to practice the healing art or our efforts may be in vain; we can not do it by showing a big lobby or by coercion or sitting down in our seats and listening to the officers of your society read an occasional paper on legislature matters of medical interest and then letting George do it. If we can take a half hour in a week at this particular time to see our legislators and in that way let them know our eye is on Springfield, we believe we will get along much better and have a Medical Practice Act that will adequately protect the lives of the sick in the State of Illinois.

## CHRONIC MALARIA—SOME CLINICAL ASPECTS*

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There has been apparent in Illinois during the past several years a gratifying increase of interest in malaria. As a disease it has always been of interest, particularly in the southern counties, in the so-called "Malaria Belt of Illinois," but there has arisen a larger, more constructive interest, a realization of its public health and economic import, and with this the practical objective of eliminating the disease from the state. Our present knowledge makes this wholly possible. Eventually public enlightenment will insist upon its being accomplished. It seems to me that my topic "Chronic Malaria" has an important and direct bearing on one method of reduction—a method in which the physician is the chief factor.

We are all more or less familiar with acute malaria, latent and masked malaria, and possibly malarial cachexia. To many the term malaria evokes a mental picture of the acute stage only, namely, periodic chills, fever and sweating. This concept is fostered by almost all treatises on the subject devoted as they are to considerations of the many aspects of the acute paroxysms. A scant paragraph or page dismisses the most important subject of chronic malaria. Indeed, malaria is described as an acute disease, when it is essentially chronic, a characteristic of most of the protozoal infections. It is ushered in, as a rule, by an acute attack of varying severity and duration, but the vast majority of cases un-

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treated or inadequately treated go on to a stage of chronic infection which comprises the greatest part of the course of the disease. Chronic malaria may be due not merely to the persistence of the original infection, but to repeated new infections without resulting in acute attacks. The acute phases are strikingly manifest, yet the unostentatious chronic stage is the preponderant cause of health, social and economic losses. As Stitt says, "The great importance of malaria is rather its invaliding tendency and by thus reducing the powers of resistance it makes the death rate from intercurrent diseases higher." The more important economic and social ravages are apparent to all familiar with this malady.

*Occurrence.*—Nearly all authorities agree that from 40 to 60 per cent or more of acute attacks represent relapses of chronic infections. Just what does this mean in Illinois? Nauss, of the State Department of Public Health, estimates there are from 22,000 to 34,000 cases a year in this state. This means from 15,000 to 25,000 chronic cases. I would give an even higher percentage. I may safely say that but few of the chronic cases are recognized or treated.

*Chronic Malaria in Relation to Control.*—It is generally accepted that the preferred methods of control are by measures directed to elimination of mosquito breeding, that is, drainage, oiling, etc. The extension of such control is slow, and follows only when economic benefits are demonstrated. An immediately applicable method of reduction is the elimination of the source of new infections, the human reservoir—chronic infections. To Bass must be attributed the ardent exposition of this method of reduction, which, it appears to me, is of even greater value in northern localities than in the South. The winters are of sufficient severity in Illinois to kill practically all infected Anopheles. Hence, man is the chief reservoir for carrying over the infection from season to season. Considering this with the relatively low endemic index, I am convinced that the adequate treatment of all malaria cases, both the acute and the more important chronic, would result in the rapid reduction if not elimination of the malaria at present existing in the state. This brings the responsibility directly to the physician; he must recognize the chronic disease as well as the acute; he must adequately treat, that is, disinfect all cases. If the sources of dissemination can be detected, quinine sterilization offers great promise.

*"Chronic" versus "Latent" Malaria.*—At this point the question arises, "What is chronic malaria?" Chronic malaria is a persistent infection with malaria parasites which cause varying symptoms at varying periods. Latent malaria is the asymptomatic chronic infection. Most writers treat at length of the latent form, passing briefly over the chronic. It is my belief that most of the so-called latent cases are chronic malaria during an apparently symptomless period. I do not deny true latent types. I rather wish to emphasize that most latent cases do give rise to symptoms at varying times, which suggest the presence of the underlying infection. Most of the statistics on latent malaria are compiled from hospital records, and obviously the periods of minor yet significant symptoms are not taken into cognizance. My experience for the most part has been in the field, having intimate contact with cases not in institutions. It is this experience which leads me to take issue with many authorities on the distinction between latent and chronic cases.

Latent malaria, as such, cannot be diagnosticated except by the finding of parasites in the blood. Chronic malaria, and this is most important, can as a rule be recognized at varying times during its course, in addition to the acute relapses.

*Symptoms in General.*—There are no definite clinical pictures found in chronic malaria. Various combinations of many "minor symptoms" are the rule. Many will be recognized as those which occur during the prodromal stage of an acute attack. They are anorexia, malaise, fatigue and yawning, headache, aching in the back and extremities, accessions of fever, night sweats, irritability, anemia, subicterus, alimentary tract disturbances, enlargement of the spleen and liver, and neuralgic manifestations. A few or many of these occur in a given case, and they usually do not continue without periods of abatement. All are sufficiently frequent to merit attention. The usual picture is that of a patient complaining of feeling "run down" and "out of sorts," knowing that he does not feel well, yet not knowing exactly wherein the trouble lies. A

careful investigation will reveal suggestive complaints.

*Symptoms in Detail.*—Malaise and fatigue are very frequently complained of. The importance of these is mainly that they are indicative of a bodily and mental condition below par. A suggestive associated symptom is frequent and excessive yawning. A patient can often tell the presence of increased malarial activity by this symptom alone.

Headache is common, is either frontal or occipital and occasionally is definitely periodic. I have several times made a diagnosis, proved by blood examination, from the periodicity of headaches, the single complaint. Aching in the back and extremities is also frequently seen, is usually not severe, and is apt to come and go in "spells."

Fever is relatively unimportant, not because it does not occur, but because the patient is not conscious of it and the doctor seldom investigates. Periods of slight evening rises are more frequent than supposed, and my experience has been that it is of daily occurrence rather than of a tertian type. A patient often tells you he does not have fever, but feels warm during the latter part of the afternoon.

Night sweating in my opinion is one of the most frequent and suggestive of symptoms, though rarely mentioned. The patient notices it, will tell you of it, and it is less of a nondescript symptom than many of the others. It, too, more frequently fails to show periodicity than not. My impression is that night-sweats gave us a clue to chronic malaria, substantiated by results of blood examinations, more often than by other symptom. I might add that often a characteristic musty odor to the sweat gives a hint to the nature of the trouble.

Anemia is commonly present, though not essential. It is usually of a mild grade of the secondary type and often overlooked, especially in negroes.

True jaundice is seldom seen. A subicteric tinge to the sclerae is frequent, and the patient will state that he has periods of looking "bilious" and sallow.

Gastro-intestinal disturbances are often complained of, especially anorexia and constipation. Not seldom do we find gastric syndromes similar to those of ulcer, chronic gall bladder disease, or chronic appendicitis.

A sometimes prevailing impression is that splenic enlargement is a feature of chronic malaria. Except in the severe grades of infection, approaching cachexia, it is, I believe, more commonly absent than present. When found, it is a valuable positive sign; its absence is of negative significance. The same may be said of enlargement of the liver; this, however, is of more frequent occurrence than is usually stated, particularly during a period preceding a relapse. It is generally accompanied by an enlargement of the spleen, though not always so.

There is a varied group of nervous symptoms, one or more of which is commonly present in chronic cases. A condition of general nervousness and irritability is usually complained of. Insomnia, or rather, "broken sleep" occurs during periods of augmented parasitic activity. H. deBrun has directed attention to a condition of "Paludal trembling"—frequently observed in chronic cases. This tremor is characterized by a slight vertical trembling of the fingers. The oscillations are of irregular amplitude, are least during positions of rest, and are more marked during intentional movements. It is an essentially unstable tremor, liable to rapid changes in daily intensity and at different times during the same day. This trembling generally increases during the pre-paroxysmal period, decreasing after the accession. I have often noted this tremor, which, of course, must be differentiated from that due to alcoholism, neurasthenia, hyperthroidism, quininization and other tremorous states. A seldom mentioned symptom, which to me is suggestive, is a condition of eye fatigue, indistinguishable from what is ordinarily understood by eye strain, i. e., pain in eyes and headache. Whether the basis of this is a nerve disturbance or simply muscular fatigue, I cannot say.

Various neuralgic manifestations are occasionally the presenting symptom. Among these might be mentioned supra-orbital, brachial and sciatic neuralgias, though other nerves may be involved; a related affection not infrequently seen is herpes zoster. The simple herpes is more apt to occur during an acute attack.

Chronic nephritis should be mentioned as occasionally associated with and resulting from chronic malaria.

Malarial cachexia is seldom seen in this state. It is an advanced stage of chronic infection in

which the resistive powers of the patient have been overwhelmed by the parasitic invasion. It usually results from repeated attacks and chronic infection producing a condition of severe anemia, splenic enlargement, physical and mental incapacity. Ascites, edema, and icteric pallor are often exhibited. It is a stage of the disease with which we are not concerned.

*Diagnosis.*—The diagnosis of chronic malaria is not always an easy task. Many of the symptoms presented are common to other diseased states. Nevertheless these symptoms should arouse a suspicion of an underlying malaria. When any of the symptoms display a tendency to periodicity, their value is greatly enhanced. Unfortunately, irregularity rather than the opposite is the rule. Chronic tertian infections usually lose their characteristic periodicity and often give rise to syndromes suggestive of estivo-autumnal infections. In the work of the International Health Board at Mound, La., clinical diagnoses would indicate about 65 per cent malignant tertian (aestivo-autumal) infections. The blood examinations revealed just the reverse, about two-thirds benign tertian infections. The diagnosis must be largely presumptive and based on clinical findings. The finding of parasites in the blood makes the diagnosis positive. More frequently than not parasites cannot be demonstrated except by repeated examinations over a considerable period of time. This is not usually feasible. A leucopenia is not constant, but if present, especially if associated with a relative increase of large lymphocytes, strongly favors a diagnosis of malaria. If added to this, pigment granules are present in the lymphocytes, the diagnosis is almost certain, despite the absence of parasites. In chronic malaria more than any other type does the therapeutic effect of quinine aid in establishing the diagnosis. Quinine exhibited over a period of a week will usually dispel the symptoms arising from a chronic infection.

*Chronic Malaria—A Focal Infection*—The consideration of chronic malaria as a focal infection is most illuminating. The infection is focally situated principally in the bone marrow, spleen and liver. The symptoms, pointing to a generalized toxic disturbance, are the indefinite, obscure complexes so familiar in focal infections of other types. There remains much to be said when regarded from this angle. Suffice it to remark that in malarious communities, manifestations of the character of focal infections, may derive from a chronic malarial infection.

CONCLUSIONS

1. Malaria is essentially a chronic infection.
2. Chronic malarial infection is frequently accompanied by symptoms which should lead to its recognition.
3. Chronic malaria is an important factor in the dissemination of the disease.
4. Chronic malaria is one type of focal infection.

DISCUSSION

DR. ROBERT W. KEETON, Chicago: This is a decidedly important subject. When I begun the study of medicine a man who had been in the practice for a long time gave me a bit of his experience. He said: "You can get about seventy per cent. efficiency in medicine with very little effort. If you raise the percentage of efficiency to ninety there is required a tremendous increase in the energy to be expended. The diagnosis of malaria presents itself to the man practicing in non-malarial districts as an opportunity to raise his efficiency from the seventy to ninety per cent. Chronic malaria in its symptomatology simulates so many other diseases that it should be definitely considered in the differential diagnosis of many obscure conditions, particularly those, in which the symptoms presented, suggest a focal infection. I wish to cite a few illustrations of this point.

A patient entered Cook County Hospital complaining of headache. This was so severe that it was prostrating and the patient's actions were of such a nature that his transfer to the psychopathic ward was seriously considered. The facilities for diagnosing his case were splendid. He was examined from every angle by all departments of the staff, but still no cause was found for the headache. He remained in the hospital as a target for work among the internes. With every change of service "Mike's headache" presented itself as a problem to be solved by the incoming internes. Fortunately a fever was discovered on him one day. After repeated examinations made during the succeeding days the malarial parasite was recovered, and a few doses of quinine changed completely the physical condition of Mike so that there was no longer a question of his sanity. The solution of that problem was missed for a long period because malaria was not considered and the diagnosis was finally literally forced upon us. A returned missionary from China had been examined for the usual causes of headache without results. Quinine given by the method introduced by Bass for sterilizing malarial carriers gave her complete relief. Always consider therefore the possibility of malaria being the cause of a given headache before admitting to the patient that you have no relief to offer.

A man in a neighboring hotel had been confined to bed for three days with a diagnosis of influenza. He

was awakened at 4 a. m. with a chill. I saw him later in the morning. At this time some prostration was present but examination revealed no pulmonary findings and no increase in respirations. Why then should a patient who had been resting in bed previously and who now presented no signs of pulmonary involvement have a chill at this hour of the day? He had a decided southern accent, and questioning revealed that he had made a recent visit to the south. Although his stay was short it was sufficient for inoculation.

There is a symptom complex known as biliousness concerning the mechanism of which we do not know very much. We do know that it is a frequent prodromal symptom of the malarial paroxysm but more often it occurs without the paroxysm. This symptom is relieved best by calomel. Consequently the southern people are addicted to calomel as a cathartic. This same symptom presents itself in many other conditions in which there is a disturbance in the peristalsis of the duodenum. People suffering from chronic constipation present periods of biliousness, but the symptom finds itself most completely developed in cases of migraine. Consequently when a patient complains of biliousness in Chicago, do not say with an air of finality, "You have migraine." Let us transport ourselves south where a patient says, "I am bilious," and the doctor reaches for the quinine bottle. It may be that one of these patients has drifted north and we will miss our opportunity of getting into the ninety per cent. class.

The problem of malaria in non-malarial districts is in much the same status as the problem of syphilis in the rural districts used to be. There was no syphilis in the rural districts. It was not looked for, therefore it was not discovered, therefore it did not exist. Malaria does exist in the non-malarial districts of Illinois. It is only awaiting discovery and diagnosis.

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## ELECTRO-ROENTGENOGRAPHIC DENTAL DIAGNOSIS*

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The purpose of this paper is to show means by which dental diagnosis can be greatly facilitated and to make a plea to physicians and dentists to become more versed in the usefulness of the electric test for pulp vitality.

Physicians may ask why they should be requested to learn something, which, at first thought, may appear purely of interest to dentists. However every practicing physician is almost daily searching for foci of infection in patients suffering from various disorders. While the site of etiologic focal infection may be almost anywhere in the body, by far the greatest number are located above the neck and the teeth constitute a large percentage of this number. As Moorhead[1] states, the probability of dental infection must be given first consideration in all cases of focal infection between 25 and 60 years of age. The teeth and their surrounding structures should be looked upon as foci of infection in these cases until otherwise proven. To successfully diagnose these dental sources of focal infections, roentgenograms are absolutely necessary. It is taken for granted that every physician and dentist is convinced of the great aid roentgenology has rendered in dental diagnosis. The consensus of opinion in regard to this is well stated by Thoma.[2] "Roentgenology has become a most important means of diagnosis and a great aid in the treatment of diseases of the oral cavity. For many conditions the roentgenogram is only used to ascertain the exact nature of the lesion which has already been diagnosed by other methods, but for chronic diseases which occur without giving any symptoms, the roentgen method is sometimes the only way by which the lesion can be discovered. In searching for the cause of nerve irritation or for foci of infection, negative findings are often as valuable as positive ones in establishing the presence of and eliminating oral diseases as causative factors. No dentist who has the welfare of his patients at heart can practice today without the aid of this important method of examination."

Conceding the value of roentgenographic diagnosis, we have not yet fully realized the great usefulness of the electric test for pulp vitality in oral diagnosis. While the test is well known, but comparatively few dentists use it. This is said to be due to the fact that its importance and value have not been fully appreciated, that a correct technic has not been mastered, and that dental electrodes in use are inadequate. The electric test for pulp vitality is of the greatest importance to anyone who attempts dental diagnosis and is often indispensable. The test used as an aid in interpretating dental roentgenograms gives us the most perfect form of oral diagnosis that we know of today. Physicians are continually receiving reports of dental roentgenologic examinations made on their patients and should be in a position to know the value

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of the vitality test in order that they may be able to suggest it when necessary.

*Principles of the Test.*—The objects of the test are, of course, to find out which teeth are vital or not. *The principles of the test are based upon the fact that a tooth with a vital pulp is never the source of a periapical infection, while a tooth without a vital pulp MAY be infected. A tooth with a periapical infection will never show a vital pulp.*

The electric test is by far the most reliable of any tests we have to recognize pulp vitality, although not infallible, and is attended with no dangers.

*Advantages of the Test.*—The advantages of the test are well given by Raper[5]:

The advantages derived from using the electric test for pulp vitality, in connection with radiographic examination, are: 1. Misinterpretation of radiographs is much less likely to occur. 2. The application of the test enables the operator to select those teeth which should be radiographed with especial care. 3. Because it assists in radiographic interpretations and because it points out the particularly suspicious teeth, the test reduces the number of exposures necessary, particularly the number of make-overs necessary. (This is especially advantageous to the conscientious operator.) 4. When, in a case of metastatic infection the patient cannot afford to have all parts of the mouth radiographed, the number of radiographs made, and so the cost, can be reduced to a minimum by eliminating those teeth from examination which respond perfectly to the electric test for pulp vitality.

*Technic of the Test.*—Those most proficient in the vitality test say that it requires more skill and judgment to apply the electric test correctly than to make photographically good roentgenograms (not good roentgenographic diagnosis). There are many points in the technic of the test, etc., which are not within the scope of my work. However, to those interested I would unhesitatingly recommend a careful study of Raper's "Electro-Radiographic Diagnosis," an excellent monograph which is devoted entirely to the subject and from which I quote.[4]

Everything considered: The inadequate dental electrodes which have been used. The inadequate machines also. The erroneous idea that the technic for electric pulp testing requires almost no knowledge or skill, that the entire subject is covered in the eight fundamental steps in technic set forth in Chapter IV, in less than five hundred words. The unwillingness to accord the test and its technic sufficient respect. I say, everything considered, the wonder is not that some men attack the test but that it is as popular as it is.

*Limitations of the Test.*—Again quoting from Raper's excellent treatise.[5]

Every test, everything, for that matter, has its limitations. The most outstanding limitations of the electric test for vitality of the dental pulp are:

1. Crowned teeth cannot be tested. (One must continue here to use the thermal tests which the electric test so nearly displaces altogether, or make a diagnostic opening.)

2. Some teeth with very large fillings cannot be tested successfully. Fortunately there are not many such teeth.

3. In multirooted teeth, where the pulp in one canal is vital and in another non-vital, the response to the electric test is practically the same (a little weak) as though all parts of the pulp were vital.

4. One is doing well to determine, from the electric test, simply whether the pulp is vital or not. Even this cannot always be done. The average operator (the writer includes himself in this class) will find it impossible, except in the rarest cases, to diagnose pathologic states of the pulp with the electric test. One is treading on treacherous ground indeed when, after applying the electric test, one makes bold to say, "The pulp is vital and in a state of normality or health, and this one is also vital and much inflamed with pus infiltration." It is not practical.

*Clinical Value of the Test.*—The most important discussion of any test is its clinical value in actual practice. I know of no better summary of all the conditions in which the test can be used to advantage than to quote the following from Raper.[6]

1. In cases of systemic disease to determine which teeth are most suspicious. 2. Where no x-ray machine is available. 3. To check all x-ray findings. 4. To find teeth with dead pulps which could not be found by any other means. 5. To find abscesses which might otherwise be overlooked because they fail to show in radiographs made at certain angles. 6. To assist in recognizing very slight osteoclasia. 7. To avoid mistakes when the end of a root and an abscess cavity (with no connection between the two) overlap in the radiograph due to the angle at which the exposure is made. 8. To avoid misinterpretation when the abscess cavity laps to the lingual or facial of the adjacent teeth. 9. To differentiate between the mental foramen and an abscess cavity. 10. To differentiate between the anterior palatine, or incisive, foramen and an abscess cavity. 11. To differentiate between the antrum of Highmore and an abscess cavity. 12. To differentiate between the somewhat radiolucent area which sometimes appears in the apical region of upper lateral incisors, due to the canine, or incisal, fossae, and radiolucence caused by infection and pathologic bone change. 13. To differentiate between nostril spots and abscesses. 14. To aid in the recognition of nasal fossae spots as such. 15. To aid in the recognition of the inferior dental canal as such. 16. To differentiate between a very small abscess cavity and an un-

usually large periapical space. 17. To differentiate between a cancellous spot of unusual appearance and an abscess cavity. 18. To assist in differentiation between pathologic and physiologic conditions about the buccal roots of the upper molars. 19. To assist in differentiation between an absorbed, roughened root and a radiograph made with the rays directed through the tooth diagonally from facial to lingual. 20. To differentiate between partially formed root and an abscess. 21. To determine how many teeth are involved in an abscess. 22. To assist in differentiation between dentoalveolar abscess and periodontoclasia (pyorrhea).

The author feels that the electric test for pulp vitality is very necessary in many cases as an aid to the correct interpretation of dental roentgenograms and urges that physicians and dentists avail themselves of it more frequently.

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## CHRONIC SEPTIC SPLENOMEGALY SYNDROMES*

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The recognition of chronic enlargements of the spleen is now a matter of ancient history as far as we are concerned, but their classifications and respective differentiation was begun in the 19th century and is still under way. This one great general group of chronic splenomegalias was first split up in 1841 by Bennet of England and Virchow of Germany, when they almost simultaneously described one type of splenomegaly with changes in the white blood cells. This new grouping comprised the leukemias, and thus removed this class from the hitherto all comprehensive general group of splenomegalias. Ehrlich differentiated the two forms of leukemias —myeloid and lymphoid—in 1883.

Later another class of chronic splenomegaly syndromes was separated from the remaining large general group. This was the result of recognized changes in the erythroblastic elements of the blood—more or less definite red cell changes—which served to distinguish at first the primary type of enemia. Later on, a definite cause was determined in some of these cases as for instance, the parasitic anemias and the like. Still later, (1892-1903) another group was differentiated by the red cell changes. This is the Polycythemia Vera group, in which chronic splenomegaly is associated with an abnormally high red blood count and hemoglobin percentage.

Hodgkin's disease, first described in 1832, was more definitely differentiated from the remaining group of splenomegalias 20 or 30 years later. In the meantime it was learned that tuberculosis and syphilis produced splenomegaly and later that malaria did the same thing.

In 1866 Greisinger and his assistant Gretzel described anemia splenica, a condition characterized by splenomegaly, and in 1883-1894 Banti described in detail the terminal stage of this type of anemia, at that time as a separate disease,—Banti's disease.

In 1885 Murchison first described the familiar type of hemolytic icterus and in 1898, Hayem described this and the acquired form as a clinical entity—a chronic splenomegaly syndrome—with chronic jaundice but without bile in the urine and without clay colored stools, though there was nothing distinctive about the type of anemia to separate it from the early described splenic anemia.

Thus, we see that by the process of differentiation and exclusion first one group and then another of chronic splenomegaly syndromes have been split off from the original one, general group, and reclassified and described in more definite detail. We still retain the term splenic anemia to designate largely the remaining group of chronic splenomegaly syndromes, characterized by chronic enlargement of the spleen, frequently the first important finding, associated with a secondary chlorotic type of anemia which tends to become marked finally. The chronic enlargement of the spleen may be the only important finding for a long period of time. In the second stage the anemia becomes an important factor together with leukopenia. In the terminal stage, a secondary, portal type of hepatic cirrhosis with consequent ascites, hemorrhages, exhaustion and death.

Many factors are probably concerned in the production of this left-over and still undifferentiated group of splenomegalias but they are in a general way unknown. Thus, thrombo-phlebitis of the splenic vein brings about a syndrome which can not be differentiated. In this great

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group of so-called splenic anemias, the essential spleen changes consist of chronic fibrosis, thrombo-phlebitis and an atrophy of the pulp cells. When we are able to recognize a definite cause in one of these cases this syndrome then is recognized as belonging properly to the etiologic disease and not as a case of splenic anemia by name, though the spleen changes and the further progress of the condition may be identical in the two classes of cases.

The anemia largely results from these chronic spleen changes themselves without special regard to the cause of the changes.

Functionally the spleen is not an isolated organ of independent action. It functions as an important part of several systems: (a) The spleen-liver filtration-detoxication system; (b) The hematopoietic system; (c) The lymphatic system, the spleen really being classified as a lymphatic structure; (d) Its connection with the endocrinopathic system and the question of possible internal secretion are more uncertain. Many functions are attributed to the spleen but none are so all important that they are not rather readily assumed by other parts of the various physiologic systems with which the spleen is associated; hence its removal is well tolerated physiologically. However, there are two functions which bring it prominently into the lime light in these splenomegaly syndromes: (a) Filtering infective and toxic substances from the general blood stream; (b) Its power of destroying crippled, worn-out red blood cells.

Like the liver and kidneys it receives an enormous amount of blood in proportion to its real nutrient needs. This fact alone suggests a special action on this enormous amount of blood which passes through it and which comes entirely from the general systemic blood stream. From the spleen, it has but one outlet, through the splenic and portal veins to the liver, which is the greatest detoxicating organ of the body and the one most capable of regenerating itself. The blood in the spleen comes into the most direct relationship possible with the great mass of pulp cells.

The liver stands between the portal blood stream and the systemic circulation and its work of detoxication and elimination has to do directly with the portal blood, 25 per cent of which is made up by the blood which comes from the spleen. It has nothing to do with the filtration of the blood from the general stream except as this first comes through the spleen.

Thus a primary enlargement of the spleen with secondary enlargement of the liver would at once suggest to the observer that the infective or toxic substances as directly related to the splenomegaly must be carried primarily by the general blood stream. On the other hand, in the case of primary liver enlargement with secondary spleen enlargement, the observer would think first of the portal blood supply itself and of the regions whence it comes, which of course includes the spleen. If the source of infective material causing the liver enlargement is coming from the spleen and not from the other tributaries of the portal vein, then the spleen would show the first and most marked enlargement, with the liver changes occurring secondarily.

In such cases it is presumed that the spleen is unable under the conditions, properly to filter and to detoxicate the blood brought to it. It finds itself unable to finish what it has begun. Then after the spleen acts on this great quantity of systematic blood it is turned over to the liver through the splenic vein, which purposes to finish the work of filtering and detoxication begun by the spleen, and this accounts for the secondary liver involvements and enlargements in those cases in which the systemic blood stream is carrying an unusual amount or type of poison and in which cases the spleen can not handle the situation as presumably it does largely under normal conditions.

In many of these splenomegalias the increased demand for this work on the part of the spleen and the increased efforts on the part of Nature to do this work, accounts for many of these spleen enlargements—largely work hypertrophies in themselves. Enlargement of the liver due to systemic stasis from heart incompetency of course, is not considered in this class of enlargements, as it is not directly due to an infective or toxic substance.

Infective or toxic substances may be distributed to the liver through the bile duct system in its elimination from above downward, producing biliary cirrhosis with jaundice. General infections such as syphilis may cause this type of cirrhosis and so may chronic focal infections. The spleen becomes secondarily enlarged

but ascites does not develop unless there is an association of cirrhosis of the portal type sufficient to obstruct the portal circulation. This often occurs later in the progress of the case. Moderate spleen enlargements of transient type have long been recognized in connection with the various acute infective conditions, in which the systemic blood stream is carrying infective or toxic poisons, but with the disappearance of the acute infection, the spleen rapidly returns to normal.

Splenomegaly becomes one of the important early findings in a variety of syndromes all of which bear more or less intimate relationship to one another. Anemia sooner or later becomes another regular and important finding. These associated anemic states may become very serious in themselves and are often the apparent cause of death. These anemias are the secondary type, at least those associated with the greater enlargements of the spleen.

In these chronic splenomegaly syndromes the spleen enlargement is not to be thought of as the disease itself though it frequently becomes a matter of the greatest importance during the progress of the syndrome, especially because of its power to destroy the red blood cells and even the platelets and white cells. Why this increased destruction of the cellular elements of the blood thus occurs, is not well known, but that it does occur at a rate that threatens the life of the patient in many cases, seems an established fact. Hence in many of these cases the spleen becomes finally the greatest disturbing factor in the syndrome and must be dealt with accordingly. Presumably the removal of the causes of these chronic splenomegaly syndromes would largely result in spontaneous recoveries, especially early in the progress of the condition, but in a general way, very little satisfactory knowledge as to the operative causes in these syndromes can be had and it is only in the occasional case that these causes become definitely understood.

In this connection I wish to report two cases in which the tonsils were predominantly the focal infection producing chronic septic splenomegaly syndromes, with acute recurrent exacerbations characterized by rapid onset with or without chill, but with high fever, definite anemia of the secondary type, loss of weight, primary spleen enlargement and with secondary liver enlargement.

Case 1. L. C., aged 35 years, white, male and a farmer. He was seen in consultation at home on October 24, 1921. His family history was negative. His past history showed that he had never been sick and that his normal weight was 145. His habits were good.

*Present Trouble.* In August, 1917, he had his first attack characterized by a throbbing, more or less continuous pain in his left upper abdominal quadrant. It was localized. With this he had high fever but never has had chills. These exacerbations of pain and fever had repeated themselves every three to several weeks for the past four years. His physician states that the patient's fever ranged from 102 to 105 in these attacks, which lasted a few days. Also that he had always felt an enlargement in the upper left abdomen during these attacks and that the liver was usually considerably enlarged also.

Between these exacerbations the patient had no pain or fever and worked. His physician did not see him often in these free intervals, but was able to find even then, that the upper left abdominal mass was still present but much smaller and not tender or painful and that the liver enlargement apparently was absent.

*Physical Examination* at the time of this visit at home, showed the patient apparently quite ill. He had fever of 104 and had rather marked anemia of the secondary type but no jaundice. He had tonsils which showed the appearance of a moderate chronic infection. The teeth and gums appeared to be negative though he said he had two teeth removed because of a little localized infection two months before. The chest, lungs, heart and aorta appeared to be negative. Blood pressure was 50/95 and pulse below 100. Examination of the abdomen showed a definite upper left abdominal mass which extended well beyond the rib margin, was movable to some extent, and was tender to manipulation and he described this mass as the site of his moderate pain discomfort during these attacks, though at times these pains were quite troublesome. This mass was an enlarged, rather firm spleen. The liver was considerably enlarged, reaching from the 5th space in front to three or four fingers below the rib margin. It was moderately tender. There were no other important findings and no lymph glands were palpable except those draining the tonsils.

On October 30, 1920, he entered St. Anthony's Hospital for a more extended study. He had been up for two days before coming and was feeling much better and without fever. At this time he weighed 130 lbs. and his blood pressure was 60/110. The spleen mass was only just palpable and was not tender. Liver was within normal limits of size.

Laboratory examination at this time showed blood Wassermann negative, urine 1018 and negative otherwise. Stomach contents examination was negative except for a moderately increased acid finding. Stool examination was negative and no parasites could be

found. Blood examinations for malaria were negative at different times. Blood counts showed total whites 8100, polys 68%, large lymphocytes 17% and small 15% with hb 72%. These examinations were repeated a number of times with practically the same general findings except that his blood state improved under treatment. He continued, however, to have these relapses, during which the spleen and liver became enlarged, his fever high and his anemia more marked. In November and December he was given five or six Neosalvarsan treatments with the idea of improving his anemia and as anti-syphilitic test treatment. His anemia improved moderately from these treatments but his relapses continued though his weight got back to 145, which was normal, by the end of January, 1922.

X-ray examinations of his teeth, chest and gastro-intestinal tract had all proven negative. He was still continuing in his cycles of relapses. I had observed that his tonsils were definitely infective at each examination and I suspected them as the cause of these attacks. Examinations had shown that the spleen was the organ first to enlarge and the liver second, showing the infection to be coming to the spleen through the general blood stream and the enlarged, tender, tonsillar lymph glands and infective appearing tonsils localized my attention to this region.

I advised him to have tonsils removed which he did in the spring of 1922 at another hospital. I have not seen him since that time but his physician informed me about the first of May, 1923, that this patient was a great deal better since his tonsils were removed but that he had had an occasional attack of mild character since that time without much fever and probably without much spleen enlargement but his physician had not seen him with any regularity since tonsils were removed. This patient of course is not well. There may be further infection in the throat region which is continuing the symptoms in a mild way but it seems that he is so nearly well that he has practically ceased to consult physicians. He has no liver or spleen enlargement as far as his physician has determined during his free intervals, and he is not anemic.

Case 2. A boy of four years who was seen in consultation on January 7, 1922. The family history was negative and the child's past history showed that he was a healthy baby and apparently had been well and was a plump child, except that he was rather subject to colds and had had three or four so-called "pneumonias" in previous winters.

*Present Trouble.* In March, 1921, this patient had a hard chill and a high fever, daily for two weeks with severe sweats and with great enlargement of the upper abdomen due to spleen and liver enlargement. His anemia became marked during this attack. He had appeared to be well up to this onset. After the end of two weeks he slowly regained himself and the liver and spleen enlargement largely subsided and his anemia improved but he never felt as well as before this attack.

In July, 1921, he had a recurrence of hard daily chills, high fever, sweats and with marked anemia and prostration, lasting two weeks. In this attack also the liver and spleen became large. Gradual improvement again followed but his recovery was incomplete as before though he was not under the physician's care or treatment regularly during these intervals.

On December 15, 1921, he again developed an acute relapse with daily chills, fever, anemia and liver and spleen enlargement as before. In these three attacks his fever had usually reached a daily maximum of 104 to 105 and his pulse was well over 100. He was in the midst of one of these acute attacks, with fever 105, when I saw him.

*Physical Examination* showed a thin, very anemic-looking child without cough, or lung or heart changes. His tonsils however, were very infective in their appearance and were large and he had several large, tender lymph glands behind the angle of each jaw. The family had noted the enlargement of these glands especially during these relapses. His abdomen was large due to an enlarged spleen which reached far out into the abdomen and a secondary enlargement of the liver. The spleen was much larger in proportion than was the liver, showing that it was the organ of primary enlargement. Again it was evident that the general blood stream was carrying the infective substances and the local throat and lymph gland findings indicated the focal source of this infection. The child was very ill. No laboratory examinations could be made at this time. Clinically this case at this time was considered to be a chronic septic splenomegaly syndrome secondary to tonsils but the child was thought to be syphilitic, not because of any positive findings or any evidences in the appearance of other members of the family, but because of his extremely low resistance to infection. A mercurial rub was directed and carried out each night for a week and a little aspirin was given as a symptomatic treatment. He had no further chills, his fever subsided and he again improved as before.

On March 9, 1922, he was brought to St. Anthony's Hospital. He was still under-nourished and the spleen was still moderately enlarged but the liver was practically within normal limits. The tonsils were very infective-looking but the lymph gland enlargements in the neck had largely subsided. His urine was 1002 but negative otherwise. His hemoglobin was 70%, the total whites 6300, polys 64%, large lymphocytes 14%, small 16% and Eos 6%. The stool examinations were negative, no parasites of any kind being found. The tonsils were removed the next day after entrance and the child has made a remarkable recovery, returning to his usual good health and color and plumpness in type of build, and has had no further symptoms and the spleen and lymph gland enlargements have entirely disappeared.

These are undoubtedly chronic septic splenomegaly syndromes in which the tonsils were

an important factor. The first patient cited apparently is not entirely well. This may be because of carrying a residue of infection about his naso-pharynx or mouth, even since his tonsils were removed, or it may be due to more marked and more permanent spleen changes in this case.

Spleen enlargement in some degree is a very frequent association in secondary types of anemia and it should always be thought of in this relationship. All chronic splenic enlargements are potentially surgical, yet in not all of these chronic splenomegaly syndromes has removal of the spleen proven generally satisfactory, but this has been especially true in the hemolytic jaundice cases and in the large complex group of splenic anemia cases and would probably prove equally satisfactory in the chronic septic splenomegalias, barring especially unfavorable septic changes elsewhere, which would necessarily continue the patient's ill health and danger. It has also been curative in a certain type of splenomegalias due to hibernation of the infection in the spleen as in syphilis, malaria and the like, which conditions may finally produce a syndrome typical of the findings in so-called splenic anemia. Happily these cases are infrequent. However, chronic splenomegaly syndromes of various classes but usually due to unknown causes, are quite common and the spleen should not be forgotten as an important factor in these cases. Surgical removal should be considered early in the presence of peristant splenomegaly syndromes except in those groups where it has been proven of doubtful benefit, but an effort should always be made to determine the causes in such cases, and to remove them if possible. Focal infections should be looked to most carefully.

DISCUSSION

Dr. A. C. Schoch, Bloomington: I would like to ask if the blood picture in Case I has changed to date.

Dr. F. Buckmaster, Effingham (closing the discussion): If I understood the question, the Doctor wants to know what the blood picture is now or recently. I have not seen the patient since he had his tonsils removed a year ago. His physician at home says he seems to be carrying weight normally, his color is good, but he has had no blood count made. The man has considered himself so nearly well that he has practically not consulted anybody. The Doctor has called him in from the street and made examination several times during the past year and seems to think that he is improved.

## CO-OPERATION BETWEEN THE CLINICAL LABORATORY AND THE PHYSICIAN*

JOSIAH J. MOORE, M. S., M. D.,

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CHICAGO

A most satisfactory arrangement in laboratory service is one in which the physician himself is a trained clinical pathologist and has the time to oversee the various laboratory examinations. Having first hand knowledge of the clinical symptoms, the tests and their interpretations are made accordingly and as the physical examination is directed either to conform, or deny, certain suggestions that are obtained in the history, so the laboratory tests are likewise applied with a similar endpoint in view. The multiplication of specialties, the limitation of the day to twenty-four hours and the many technical details and varied equipment necessary in the new laboratory procedures, prevents the majority of physicians from indulging their desires and inclinations. And, I am fully convinced that this is their desire because hardly a day goes by that some physician does not say, "I wish I had more time to keep up my laboratory work."

Since both the clinician and pathologist realizes that one individual can rarely combine all the qualifications then we must adopt some plan that will give equally good results. This has been done by installing laboratories in hospitals or in central locations in the larger communities.

The hospital laboratory with a competent pathologist in charge where the pathologist can either see the patients with the clinician, or at least can be in close contact with him is very satisfactory. However, there are hundreds of hospitals equipping laboratories and only very few competent pathologists in the country to man the same. To make matters more serious very few young men are taking up pathology in the medical schools as a life specialty. The difference in remunerative returns between the pathologist and practitioner have been so marked that many of the teaching pathologists are advis-

*Read before Section on Medicine, Illinois State Medical Society, Decatur, May 16, 1923.

ing their students to learn pathology only as a foundation for the better practice of medicine.

To overcome this scarcity in competent pathologists one man may be employed by several hospitals on a part time basis. This has been found to be a very satisfactory working arrangement in some places. But to care for those hospitals whose size, income or location does not permit either a full or part time pathologist and for a large number of physicians who prefer their laboratory work performed by the more prominent pathologists, there has arisen in this country particularly, a large number of clinical laboratories situated usually in the larger communities. I wish to speak particularly of the physician's relation to these laboratories, but the remarks will apply equally well to others. How can we get the best results from such an arrangement? Good results always react favorably upon the physician through his patient, and the best results are always those which give the most benefit to the patient.

In the first place I would advise every physician that he cannot get in too close contact with his laboratory. Become personally acquainted, if possible, or correspond with the personnel. The directors and workers in a laboratory are much more important than equipment, space, or material. A good personnel should give out reliable reports, a poor personnel frequently cannot. Find out from those in the same specialty if the individuals are reliable and competent. Do all you can to know that they merit your trusting them with tests and diagnoses that are of the utmost importance to you, and when you have found the laboratory above reproach and you are satisfied, have confidence in them.

Trust your pathologist and laboratory man. If you do not trust him select some one in whom you will have confidence.

In my opinion every Wassermann test should be accompanied by a brief history of the case. Best results can always be produced if the physician and serologist work together. For instance, if a patient is problematical, if he is for general information, if he is an early luetic suspect, or a late luetic suspect, if the physician would give this information to the serologist it would assist the serologist in interpreting Wassermann results. A reliable serologist simply wishes to reach the truth of the situation and a physician need not fear that the results of the test are going to be juggled because he happens to know something of the case. If one cannot be trusted with the history, how can the same individual be trusted to perform such a difficult, delicate procedure as a Wassermann test. The serologist usually has no way of checking up his results with clinical symptoms and diagnosis except through the information he receives from his physician.

When the Wassermann result differs materially from that anticipated by the physician, it is always advisable to have the test repeated. It may be that it is necessary to have a number of tests done and the patient be kept under observation over a period of time before a final decision either way may be made. The serologist is most happy to work with the physician in a case of this nature. When a result has particularly pleased a physician it would be a source of much encouragement to the serologist if the physician would mention his approval.

Anything that means as much to the patient as a Wassermann result, either positive or negative, is worth doing right or not at all. Physicians often send in most inadequate material in cases of blood and spinal fluid both and expect par-excellence results. The serologist must have suitable specimens in order to give reliable results. When a patient has gone through the discomfort of a spinal puncture the least that can be done is to withdraw enough fluid so that a complete and thorough examination may be made that the patient may truly profit by the result. If in such cases enough material would be taken and a request made for all examinations be done, much time would be saved on the part of the physician, the patient and the laboratory concerned.

Fortunately the Wassermann test although still looked down upon by many is becoming of greater value as the technical procedures are controlled. A recent editorial on the Wassermann test in the *Journal A. M. A.* reads: "It cannot be said at this time that a positive Wassermann reaction is obtained only in syphilitic infection, but the trend of recent investigation is very strongly in that direction." With closer cooperation between the clinician and the laboratory the errors which are inherent in this test can be reduced to a minimum and can be quickly corrected and explained as they arise.

It is sometimes very difficult to differentiate

between a syphilis of the nervous system and epidemic encephalitis. The examination of the spinal fluid if sent in with no history, but simply calling for a routine examination would consist of a cell count, globulin test, Lange colloidal gold test and Wassermann reaction. If positive, they would indicate syphilis, but they can be negative in syphilis. If a history or the differential diagnosis of encephalitis accompanied the fluid we would now test for sugar by the Folin method (not by the procedure of reduction in Fehling's (copper) solution.) The sugar frequently is increased in encephalitis and decreased in syphilis, thus aiding greatly in the diagnosis. However, this test would be done only if specified, or at the suggestion of the pathologist after communicating with the physician.

The pathologist is a consultant and I know of no type of specialist who is so willing, even anxious to give of what he knows to the clinician and patient without regard to future returns. This is shown nowhere so well as in the diagnosis of tissues or in the performance of autopsies. The most difficult task in a laboratory is the diagnosis of tissue. Many areas have to be examined in some instances before the nature of the lesion can be determined. It is always advisable that the entire specimen be sent to the laboratory, in order that the pathologist may use his judgment in selecting such areas. It sometimes happens that small portions selected by someone else and sent to the laboratory have failed to reveal the true nature of the pathology with quite disastrous after results.

In addition to the proper material it is of paramount importance that a brief but complete history accompany the specimen. To say "Breast" without giving the age, symptoms and history is not fair either to the patient, physician or pathologist. However, breast conditions are fairly easy to differentiate as compared with some others. For example when portions of a lymph gland growth are sent in for diagnosis with no history, differentiation sometimes is almost impossible. Ewing says, in speaking of lymphosarcoma that "The histological characters of the process together with its gross anatomy usually separate typical cases of lymphosarcoma from pseudo leukemia, leukemia and Hodgkin's granuloma, and from other tumors of lymph nodes. Yet since some of the above conditions may occasionally give rise to lymphosarcoma, it is impossible always to distinguish between them without *very full clinical data.*"

MacCallum says that "from a single section it would probably be impossible from a study of the cells to distinguish between an involvement of a gland by chronic lymphoid leukemia, leucosarcoma, lymphosarcoma, and small round celled sarcoma." Stress is laid upon the gross appearance and complete clinical data, but too often does the laboratory receive a tissue marked lymph gland with nothing else. Many such similar incidents can be related in tissue diagnosis. Sometimes we feel proud of our successful diagnosis with no history, but we never make any excuse for our failures, knowing full well that we should not hazard a tentative guess without qualifications. Desiring to give the full value of experience, training and ability in this diagnosis, the pathologist should be supported by the referring physician with clinical history, symptoms and gross pathology.

In order to get closer co-operation between the physician and laboratory in this line of work we are now keeping a record of the after results on all cases of malignancy diagnosed by us, first obtaining the method of treatment and then by a yearly follow-up card. This gives us valuable information on treatment, virulency of growth, etc., which will later be of value to these same physicians. Secondly, we are installing a system of sending the sections upon which the diagnosis was made to the physician to stimulate his interest in pathology and for reference in his files.

These are but a few examples of where we can improve the cooperation between physicians and the laboratory. Others constantly come to the attention of all of us. At present we see references continually to various conditions associated with the psychic world. A famous Englishman is now going through the country lecturing upon this topic. This intangible, immaterial thing may be likened to morale; it is present in the smooth working laboratory and it is stimulated and increased by proper and intelligent assistance. Thus nothing aids as much as co-operation between the physician and laboratory in enhancing the thing the true laboratory most covets, the spirit of laboratory service.

## DISCUSSION.

DR. CLIFFORD U. COLLINS, Peoria: Abstract admitted the ideal condition to be one in which the physician is a pathologist and clinical technician him-

self and thus able to do the work or have sufficient knowledge to properly oversee it.

The next best arrangement is where the physician and surgeon has the pathological laboratory in his office, but even in that situation, it is well enough in a disputed obscure case to have more than one opinion. It is his practice in such cases to send three or four specimens to different laboratories and in that way he fortunately came in contact with Dr. Moore a year or two ago.

In a trip east on the Tri-State special train he heard of cooperation with the x-ray man who was allowed to see the patient and get his own history. The physician made his diagnosis and the x-ray man also got the history and did his x-ray work and did his diagnosing and after that they came together and collaborated. He thought that an ideal arrangement. That would also be a good arrangement with the clinical laboratory man and the pathologist.

Unfortunately it is not always convenient for the pathologist to get the history. So it is perhaps better for the clinician to furnish him with the history.

As a matter of fact, the pathologist does not need that history ninety-nine times out of one hundred. You send him a specimen of tissue and he will be able to tell you what part of the body it came from. I know that because once I had a lad with a tumor in the right upper abdomen, made an exploratory incision and found a tumor of the liver, in an inoperable portion of the liver. A small portion was removed and sent to our own laboratory and a small portion to Dr. Moore. In the meantime we got suspicious and went more fully into the history of the family and found out that a little sister had a saddle nose. The history developed rapidly and we had a Wassermann made and it was positive. Dr. Moore promptly reported back that was a large gumma of the liver due to syphilis. So he didn't need any information.

Perhaps one time in a hundred the history will benefit the pathologist. There is no harm in telling the pathologist where you find a growth that is removed. It certainly does add to his interest to know there was an adenomyoma that should be found in the uterus but was found in another place.

Pick out your pathologist and have confidence in him. If you don't have confidence in him, don't have anything to do with him. If you do have confidence in him, then trust him. If you trust him and send him your clinical history, you will find your relations will be much more interesting and much more profitable.

DR. L. C. TAYLOR, Springfield, agreed fully with the idea of cooperation between the internist and the laboratory man. As a member of the Civil Service Board of the state and a member of the Examining Board since the present Civil Administration Code went into effect, he has had an opportunity to study the methods pursued in the different universities in teaching the students, and in the Medical Schools of Chicago.

By over-emphasizing the laboratory we have in many instances gotten the younger men who are out fresh from colleges in the habit of referring their cases to the laboratory first, whereas the microscope should always come last.

In the practical examinations in the Cook County Hospital in the course of a year, some five hundred or six hundred cases are assigned to that many young men, with the advice: "Take the history of the patient first. Make a physical examination and write down your findings. If, after that, you want something from the laboratory, we will give it to you."

One of the internes came to me one day after I had assigned a patient to a bright young man but a little bit anxious about the diagnosis and said, "This man wants laboratory findings", about five minutes after he got the patient. He said: "I would like to have an x-ray picture of his chest. I want the Wassermann. I want the spinal fluid examination, blood examination and the urinalysis." I asked: "Is there anything else you would like to know about this patient before you examine him?" He said: "How are we going to make a diagnosis?" I replied: "Make the diagnosis just like you will if called in your Ford ten miles away and can't take your x-ray with you." This young man came to me at the close of the examination, thanked me for my suggestion and stated that he had had a very interesting case.

Don't ask for a laboratory examination until you know all about your patient that you can find out without a microscope.

DR. J. G. FRANKEN, Chandlerville, thought the duty of the physician is to find out what is the matter and whether we possibly can relieve the patient.

Most of us are general practitioners and are expected to do everything possible for the patient. If we cannot do so individually, we should do so collectively by getting the help of those who specialize in particular things.

If we have no time for laboratory work, we go to the one who knows. With his counsel we obtain better results. For the same reason we consult with the radiologist and the chemist. They help to get our patient better.

No general practitioner is able to make a Wassermann. He must send to the laboratory. Microscopic examination in simple matters we can attend to, but when it comes to stains we haven't the time nor have we the material at hand always to do all this. So it resolves itself to the relation between the general practitioner and the specialist.

The specialist is not for the patient, but the specialist is for the general practitioner to help him do his work more thoroughly and to better advantage for the patient. The patient is the one concerned the most and any and every means obtainable should be had for the advancement of the cause, whether it is individually or collectively, but we are living in the age of specialization and it takes a number of specialists to make one good general practitioner.

DR. S. L. GABBY, Elgin, did not agree that the laboratory man should have the history, primarily at

least. If the laboratory man, in my judgment, is to give a diagnosis or prognosis and tell the practitioner what treatment he should carry out, then certainly he should have the history. And that is what a great many laboratories are doing. He questioned if that is or should be the province of the clinical laboratory. He feels that the treatment and the interpretation of the laboratory findings should be left entirely with the clinician, and if the clinician is not able to make such interpretation, he should fit himself so that he can, unless there is such an arrangement as Dr. Collins suggests, having the laboratory man see the patient, get a history and make a physical examination. It seems to him impossible for the laboratory man, even with a reasonably good history, to make a diagnosis and advise the treatment, though it is done entirely too much.

DR. MOORE (Closing): In answer to the last speaker, I don't think that it is the main function of the laboratory to make prognoses and give suggestions on therapy, but frequently the laboratory can be of great service to the referring physician, in these fields.

For example, amputations have frequently been made for the removal of bone tumors. If the tumor was of the benign type, as we now understand the benign giant celled tumor, the amputation was unnecessary. If the tumor was a true bone sarcoma and metastases had developed in other locations, as the lungs, the operation was useless. I think the pathologist should lay emphasis in his report on the different characteristics of these tumors with their future outlook. If pathologists would then keep careful statistics on all such cases, obtaining the history and treatment from the referring physician for periods of five years and longer, some definite information could be obtained which would be of value to the profession.

The laboratory can accumulate a larger number of cases than the individual physician. The latter usually has only a few, which he considers insufficient to write about, and therefore valuable data is lost. The laboratory desires this data to give to physicians to apply as they see fit.

Dr. Collins kindly told of several instances where the correct diagnosis was made by me without a history. However on one occasion he sent a tissue which appeared to be a chronic metritis and endometritis but which on receipt of the history was classified as an adenomyoma of the broad ligament.

Regarding Dr. Taylor's remarks upon the use of the laboratory in his office, I recommend that all physicians do their blood counts, urinalysis and sputum examinations in their office laboratory if they have an efficiently trained girl or do the test themselves, the proper equipment and the time.

Regarding the last remarks he made about the practical examinations in Cook County Hospital. I attended one of these examinations and saw a fairly complete history beside each microscope. A good many men just out of school could diagnose the slides. Many of the older men read the history, and from this, in typical cases such as Hodgkin's disease or carcinoma of the breast could make the correct diagnosis. In one case a doctor whispered to me, "I haven't looked in a microscope for several years, but that history is typical and I am going to put down carcinoma."

The history is seen therefore to help both the pathologist and the clinician.

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## HISTORICAL DEVELOPMENT OF THE CARE OF NERVOUS AND MENTAL DISEASES IN ILLINOIS*

HAROLD N. MOYER, M. D.

CHICAGO

Prior to the middle of the last century there is little definite data as to the care and treatment of the insane. The beginning of the century marked the settlement of the state by a pioneer population. In that period the number of insane was much less than in older communities, a discrepancy that obtained well down to the close of the century. The population was widely distributed. There were very few large towns, Chicago in 1843 having but 7,800 inhabitants. The bulk of the people lived on farms. In such a community the problems of mental disorder are not as acute as in crowded centers. The care of a disturbed mental case was not very difficult with the nearest neighbor a mile away. Home care for those with relatives, the poor house for the indigent, and the county jail for the more disturbed and dangerous patients was what was provided.

Illinois was one of the youngest of the states to provide institutional care for a part of its insane. In 1848 at a time when many of the older states were caring for their insane in poor houses and jails, Illinois was taking the first steps for the establishment of a state institution. A reference to this period calls to mind the unselfish and arduous labors of Dorothea L. Dix who studied the condition of the insane and memorialized the legislatures of many states, urging adequate and humane provisions for these unfortunates. She presented the facts to the legislature of Massachusetts in 1843, New York

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in 1844, Pennsylvania in 1845, and Kentucky in 1846. It was largely due to her activities that the Illinois Asylum for the Insane was opened in 1851. In 1848 she urged the Congress to set aside a portion of the public domain for the care of the insane. The War of the Rebellion found her at the head of the comparatively few women nurses in the army hospitals. Circular 7 of the War Department was issued in 1862 to give greater utility to the acts of Miss D. L. Dix as superintendent of women nurses.

Twenty-one years after the opening of the Jacksonville State Hospital the Elgin institution was opened and one year later that at Anna. This definitely committed the state to the care of the insane, but accommodations were woefully inadequate; quotas were assigned to each county and when these were exceeded the quiet and chronic cases were returned to the poor farms. The contrast between the state and poor farm care was very great and it was somewhat disconcerting in those days to have a patient request that he might be included in the next lot of patients to be returned to the poor farm. Some patients preferred the informal life and greater liberty of the poor farm to the more restricted regimen of the state hospital. At that time there was much discussion of plans for boarding out the chronic insane. The results at Gheel, Belgium, were studied and many able administrators advocated a similar plan or modifications of it to meet the needs of the constantly increasing numbers of the chronic insane. Of late years comparatively little has been heard of such discussions, but a cursory survey of the masses of humanity now crowded into our state hospitals would lead one to think that a revival of them might be advantageous.

The rapid growth of the population in Cook County soon necessitated special provisions for the increasing number of insane. About 1840 a stone building was erected just north of the oldest building now on the grounds of the Chicago State Hospital. It was popularly known as the Cook County "crazy house." It was a building of three stories. The first floor was for the confinement of the more violent patients who were kept in rough hewn stone cells. The doors of these cells were of heavy wrought iron strips with an upper opening for handing food to the patient and a lower opening to rake out the straw and offal. Four of these cells were left after the building was remodeled and they were in use in my time to confine intoxicated and disorderly persons on the grounds of the Cook County farm until they could be taken to the village lock-up.

In 1879 when the writer was appointed interne at the Alms House there were then about 300 insane and about the same number of paupers cared for on the county farm which was officially known as the Cook County Alms House. A few years before that time the building which is still in use—now the oldest structure at the Chicago State Hospital—was constructed and some definite organization of the insane department was instituted including the appointment of a full-time medical superintendent. Prior to that period the medical care of both the insane and paupers had been under Dr. Fonda, a practitioner living in the Village of Jefferson, who made periodical visits to the poor farm. The first medical officer, if my recollection serves me correctly, was Dr. Tope who had charge not only of the insane but of the sick and infirm on the poor farm. This arrangement was continued for many years until the infirmary was established at Oak Forest and the paupers were removed from the Dunning farm and the latter was devoted solely to the care of the insane.

In 1879 the writer was appointed an interne at the Dunning institutions. The then superintendent and an assistant physician constituted the entire medical staff for the care of the insane and the sick paupers. The conditions on the poor farm were not very different from what they were throughout the state. The population of the poor farm was a curious admixture of imbeciles, idiots, delinquents, infirm, and incurable patients with chronic disorders. There were two very large buildings; one for men and the other for women. In a general way they resembled enormous barns with few partitions and of one story. The women's department contained about all the beds that could be conveniently placed on the floor, and under the beds and beside them were the personal effects of the inmates. They sort of kept house in this barn. It included a considerable number of families. While there were separate buildings for the men and women there was no practical separation of the sexes. They had the freedom of the grounds

and the social life of the institution was on a free and easy plan. A considerable number of children were born in the institution whose mothers were feeble minded. One woman in particular had four children, all born on the county farm, and they were a remarkably handsome lot which were shown to visitors with great satisfaction by the mother. They varied in color from a dark mulatto to a splendid blonde child with golden hair, then about four years old. This situation did not seem to attract any special attention or call for comment; it was just one of the things that would naturally inevitably happen in any well regulated poor house.

In the Spring of 1880 when the writer visited the poor farms of the east tier of counties of the state, the conditions were found practically the same with the exception that the number of inmates in Cook County was larger. This poor farm population was an interesting study composed of imbeciles, insane, incurables, and those who by reason of age and infirmity were unable to care for themselves. In many of the counties the care was fairly adequate, but in all of them there was a pronounced mingling of the sexes and illegitimate children were born and raised on the premises. In one county 11 insane persons were found huddled together in a comparatively small building under the charge of a demented patient. One demented girl was found tied by the ankle to a post with a comparatively long rope which admitted of her moving about over an area of about 12 feet. At the time of my visit she was six months advanced in pregnancy. The conditions that were found at the time of this investigation duplicated those which were described by Miss Dix 30 years before. Such conditions prevailed all over the state at a time when Illinois was opening its fourth state hospital for the care of the insane.

In the Fall of 1879 the writer was appointed the first assistant physician of the Eastern Hospital for the Insane located at Kankakee. Dr. Richard Dewey was its first superintendent, who was then organizing a staff preparatory to opening the hospital for the reception of patients. This institution was a wide departure from the accepted notions prevalent at the time regarding institution architecture. The prevailing style was a linear building with connecting wards flanking a main or administration building. The general plan of such structures was outlined by the American Association of Superintendents of State Asylums for the Insane. It was known as the Kirkbride plan, which minutely described the general arrangement of such structures, the size of the rooms, the width of corridors, and other details. It was further advised by the Association that the proper limit of size for any institution was 250 patients, though in some cases this number might be exceeded by 100. Kankakee was planned on quite different lines. There was a concession to the old form of building but it was designed to care for 500 patients, a portion of whom should be in detached wards or cottages. It was freely predicted that Kankakee would be a failure from an administrative standpoint. It must be admitted that the difficulties in the early days of the institution were considerable. One of the more noticeable was the difficulty of communicating with different parts of the institution as there were no telephones. There was one compensation in the fact that the staff was afforded abundant opportunity for exercise in the open air. Those who are familiar with modern methods of administration can hardly conceive what a handicap it was to have buildings widely separated with no means of quick communication. If one desired to get in touch with the superintendent he had to be hunted up and it was a matter of guess-work as to where he was. A clumsy substitute was to write a note and have it delivered by a messenger. In those days there were no typewriters and everything had to be written by hand. In the writer's three years of service at Kankakee letter writing, which at first was a bore became toward the close of his service a nightmare, and probably had much to do with his leaving the state service. The hospital was lighted with gas which was a constant source of worry. Much spare time was spent trying to devise a gas fixture that would serve a useful purpose in lighting the institution and not furnish a convenient point of suspension for a patient to hang himself. Many patients exercised a devilish ingenuity in turning on the gas without lighting it. Cold storage was still a thing of the future, and the problem of providing fresh vegetables during the winter months was considerable. Scurvy required constant vigilance, but it was very soon met by putting down large quantities of sour-kraut

which furnished not only a palatable addition to the winter diet, but a very efficient one in combating the scorbutic tendency. Notwithstanding these difficulties Kankakee soon became one of the most talked of institutions of the country, and we entertained many visitors from our own and foreign lands.

Restraint was then widely accepted as a disciplinary and therapeutic measure in American institutions for the insane. In October, 1879, the writer visited the Utica State Hospital and saw a restraint room whose sole furniture was 10 heavy wooden chairs bolted to the floor facing 10 other chairs on the opposite side of the room.

In each chair a patient was strapped. The noise in this room beggared description. The patients were straining at the straps, pounding the floor with their feet, and striking the arms of the chairs with their fists. Passing through this room out onto the grounds he found the medical staff playing lawn tennis, the first time he ever saw this game. In other eastern institutions while the question of restraint was not so dramatically portrayed as at Utica, yet it was held by the staff of these institutions that it was not only necessary from a disciplinary standpoint in the administration of the institution but it was salutary in the treatment of mental cases. In the year that he was appointed to Kankakee, the writer had secured a copy of Conley's work on "Non-Restraint in the Treatment of the Insane." These, together with the reports of the Morningside Asylum, convinced him that mechanical restraint was not only harmful in the treatment of the insane but was simply, from the administrative standpoint, a substitute for good management. After many conferences with his chief it was finally decided to see how far we could go in limiting the application of restraint. Accordingly, all of the restraint apparatus was gathered up and taken to the office. When a call came the writer would gather up the cuffs and straps and hurry to the wards. When he reached there the emergency was generally over. When the restraint was first taken from the ward, the attendants were convinced that nothing but difficulty was to be anticipated and they believed that they were in positive danger in not having such means of coercion at hand. The calls were very frequent in the first few days, but gradually they became less. It was soon apparent that the whole situation would be solved by educating the attendants who early realized that there were better methods of dealing with restless and unruly patients. As a result of these somewhat tentative and hesitating efforts instances of restraint became comparatively rare and toward the close of the writer's service in the institution he had succeeded in carrying his wards along for a period of eight months without a single instance of restraint, when its application was compelled by a restless patient with a broken leg.

Employment early engaged the attention of the staff. A ward report was instituted by which there was a daily statement of the activities and labor of each patient. Every patient who could be persuaded into any sort of activity was provided something that he could do. At that time there were no shops, but the ordinary domestic activities of the institution and farm work constituted an available means of getting the patients interested in some sort of employment. In those early days we probably had a higher proportion of patients actively employed than has been achieved in any of our state institutions since that time.

The personnel of the institution was of a high order. The attendants were of a high character, the most of them recruited from good families. Their faithfulness and intelligence was, I think, equal to if not better than any that I have seen in institutions since that time.

I feel safe in affirming that the physical care of the patients at Kankakee during the early days of the institution was as good as it has been at any time in the last 40 years. Our patients were clean; they were well clothed; they were well fed. When they were sick they were cared for as well as they could have been in a private house without special medical equipment.

No medical histories were kept because there wasn't time and we wouldn't have known how to write them if opportunity had offered. The only record that we did keep was that for statistical purposes, which included age, religion, and the character of the disease, together with a statement as to how long the disorder had existed, and the diagnosis. The latter was simplicity itself. The patients that were depressed were said to have melancholia; those that were elated were suffering from mania, and a few had paretic dementia. An occasional diagnosis of

monomania was made, and in the first annual report I ventured to set down a patient as being hysterical, though I put the latter in quotation marks fearing the effect of such a violation of the canons of psychiatry.

The literature available was slender. I had a copy of Pritchard's work on insanity. It was practically a paraphrase of Esquirol's work and the first edition was published in 1835. A number of later editions were reprints of the earliest edition. The same year that Kankakee was opened Dr. E. C. Spitzka published his work on insanity, which is a great landmark in the progress of American psychiatry. He was of an insurgent type, who in the language of modern sabotage threw a monkey wrench into the psychiatric machinery of the times. For a quarter of a century the Association of Superintendents was a close corporation that arrogated to itself all knowledge and claimed to have the only practical experience in the care and treatment of the insane. The leading spirit in this organization was Dr. John P. Gray, Superintendent of the Utica State Asylum. It took Spitzka but a short time to topple his nestorian dignity in the dust. At my visit to Utica in 1879 I for the first time and the last looked through a microscope and saw the pathological cause of insanity. The first pathological laboratory was established at that institution. The brains of insane were hardened in alcohol and introduced into the largest microtome that I have ever seen. It was about the size of a common kitchen sink with a well of sufficient size to hold an entire human brain. The specimen was moved upward by a micrometer screw and sections were made of surprising thinness and rather cleverly stained. These were mounted on large plates of glass, placed in the field of a microscope which was about the size of a small telescope, and with this instrument one could see certain changes most pronounced in the cortex of the brain, which Dr. Diecke said were characteristic appearances found in the brains of those who were insane. It remained for Dr. Spitzka to demonstrate that the appearances described were produced by the alcohol in which the brains were preserved. This controversy was probably the most acrimonious and in a way interesting row that ever occurred in the ranks of American psychiatrists. The writer was too young and inexperienced to take an active part in the center of the controversy, but he did what he could to add to the excitement from the side lines . His first medical paper was a joint one with Dr. Henry M. Banister on "Restraint and Seclusion in American Institutions for the Insane," published in 1882.

It can safely be asserted that the institutions for the insane in the State of Illinois were the equal of any of those in the country and this obtained from the time they were established until 1892. During a period of 32 years, extending from 1860 to 1892 there had been a continuity of management. The tenure of office of superintendents, assistant physicians, and the internal management of these institutions was very little interfered with by political considerations. In 1892 there came a change. Another political party was in power and of necessity had to displace the old officers by adherents to the then prevailing political faith. Then followed a period of decadence; one bad administration was succeeded by a worse one. The internal management of these institutions deteriorated. The interests of the patient were forgotten, care takers, attendants, engineers, assistant physicians and superintendents were appointed solely because of their political affiliations. Deplorable consequences followed. The institutions passed under the management of superintendents who had no knowledge of psychiatry and no interest in medicine. What brief distinction they acquired was as superintendents. When they passed from the stage of these executive duties they went into oblivion. Very few of the medical officers of that time ever were heard of after they left the state service. In the early period were a number of men who have since achieved an enviable distinction in their chosen calling. Among these I may mention Richard Dewey, Ludwig Hektoen, and Adolph Meyer.

A decade and a half rolls by. One bad administration succeeded by a worse one until things finally got so bad that a reorganization was inevitable. It came. A definite tenure was given the employes of the institutions below the grade of superintendent. The misfortune was that the latter were not included. In any event, while a junior officer could not aspire to be a medical superintendent, unless perchance he happened to be in political favor, nevertheless, the state institutions offered an opportunity for a

career. For the medical officers there was a chance to learn. If the superintendent happened to know something of psychiatry and be a competent medical man, that was all to the good, but if he wasn't the assistant superintendent was competent to carry on the work. Histories began to be written, staff meetings were held, and a new spirit was put into these institutions.

As I survey the present and the most distant past of my experience, I fail to see any very marked improvement in the care and treatment of the insane. In the early days it was essentially custodial; it is much the same today. The maniac depressives recovered, the paretics died and the dementia praecox group remained with us even as now. It is true that wedid not call them by the same names, but I doubt very much if the labeling of these groups has added anything to the recovery rate. I would not have you draw a pessimistic note from these remarks. I would not want it to be understood that the 40 years have been devoid of progress. To some extent we have marked time, but that is inevitable in the progress of all scientific inquiry. As the Irishman said, progress is "steady by jerks." There have been slowly gathering knowledge in other fields that will have a most important bearing on the welfare of the insane of the future. Many branches of inquiry are contributing; psychology, physiology; chemistry, physics, and soon with these additional aids clinical methods will be perfected in our state hospitals which will accomplish all that can humanly be done for the mentally disordered.

If I had my medical career to begin over again I would not wish to go back to the year 1879, but if some good fairy would touch me with her wand and bring me forth young and active from the medical school in this year, knowing what my previous existence had been, I would again enter a hospital for mental cases confident that I would see many of the vexing problems that now confront us solved before I should be gathered to my fathers.

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### A SERIOUS STATEMENT

"Eating too much is bound to shorten your life," observed the Doctor.

"That's right," agreed the Farmer. "Pigs would live a good deal longer if they didn't make hogs of themselves."—Cincinnati Enquirer.

## THE PRESENT SITUATION RELATIVE TO THE CARE AND TREATMENT OF NERVOUS AND MENTAL DISEASES IN ILLINOIS*

LEWIS J. POLLOCK, M. D.,
CHICAGO

"It is painful to reflect on their former treatment, caged in iron gratings and exhibited for money! Treated as wild beasts are, they necessarily became like them, or worse! Devils in revenge and evil, satans in deceit and delusion! Or if any portion of the man remained, think of the spirit writhing in agony or sinking with despair within them! All this and more, in some despotic countries even now exists; and in how many places are they not still made to drink the bitter cup of neglect and coldness, contempt and cruelty." "And in regards to pathology in general * * .* the subject of insanity should never be excluded, but ought, in my opinion, to hold the first place; in point of importance it is so and sure I am that hereafter it will be found the very basis of medical knowledge, though it has hitherto been thrown into the rear and studied less than any other department of medicine, nay more than this, until lately it has been rather shunned as a disreputable part of our profession, and some of those who have lately written upon it have not written in a way to exalt either themselves or it in the estimation of sensible men."

Almost a hundred years ago these words were written by Dr. M. Allen of England. In 1894 Dr. S. Wier Mitchell delivered the annual address at the semi-centennial meeting of the American Medico-Psychological Association in Philadelphia. His remarks may be summed up as a vigorous arraignment of the asylum methods of that day: "We have done with whip and chains and ill usage and having won this noble battle have we not rested too easily content with having made the condition of the insane more comfortable?" In the case records of that day he found no evidence "of blood counts, temperatures, reflexes, the eye grounds, color fields, all the

*Read before the Conference on Mental Hygiene held February 14, 15, and 16 under the auspices of the Illinois Society for Mental Hygiene, Chicago. This being one of three papers given before a joint meeting of the Chicago Medical Society and the Chicago Neurological Society. The other papers were, "Historical Development of the Care of Nervous and Mental Diseases in Illinois" by Dr. Harold N. Moyer, and "Outstanding Needs in Illinois from the Medical, Social, Educational and Investigative Points of View" by Dr. H. Douglas Singer.

minute examinations with which we are so unrestingly busy."

We are concerned tonight with again pointing out the deficiencies of that splendidly isolated step-child of medicine, the neurologist. Does anyone remember the occasion when it was felt necessary to criticize, upbraid, guide and encourage a surgeon, even an orthopedic surgeon? Has it been necessary to point out the shortcomings of an internist, to increase their armamentarium of therapeusis, their researches, their publications? On the contrary, it has been necessary to beseech them to moderate their prolific output.

The diseases of the brain offer as ready an approach to investigation as diseases of any other organ. They are as frequent, as important, as disabling, as many other diseases. If diabetes mellitus occurs in 1 per cent. of the population and elipepsy in ½ per cent. then the investigation of epilepsy should occupy the medical profession one-half the time devoted to diabetes, and I venture to predict that when this occurs with modern methods, we will approach the solution of the cause and cure of this disease.

A description of the present status of the care and treatment of nervous and mental diseases in Illinois can be based adequately only upon a thorough and comprehensive survey. Of course, the very modest description I will attempt is based only on a few available bits of information. This information is hearsay. It is not admissible as evidence. Often it may have been modified by the exigencies of the situation, a protective attitude, evasion, reservation, a glossing over of facts. Some of the information was obtained from previous surveys and may today be incorrect by virtue of subsequent changes. Again, what I may describe is from my viewpoint and it may not represent an accurate picture of the situation as seen through the eyes of others. I have always felt that public institutions have been made political scapegoats. Not much benefit has accrued from pointing out that in such an institution there was a shortage of fifty beds, or in another only a broken microscope, or in still another an example of brutality. The problem of the care of nervous and mental diseases deals with far more fundamental conditions than these. I propose to briefly name the facilities for the handling of such cases and in some instances stress some facilities which we do not have.

There are approximately 18,500 insane individuals in the State Hospitals for the Insane. There are about 5,000 feebleminded, epileptic, and incorrigible individuals in the state institutions. This makes a total of 23,500 institutional cases.

In a survey of Nassau County, New York, 1,592 mentally abnormal individuals were found, constituting 1.37 per cent. of the total population. Of these 946, or 0.82 per cent. of the entire population were judged to require institutional care. Computing the cases in Illinois on this basis 52,977 cases require institutional care. Obviously our institutional facilities are inadequate.

There are eight institutions for the insane in Illinois. It is admitted that there is marked over-crowding. A very small part of this overcrowding may be due to the closure of hospitals treating alcoholic and drug addicts. Within the next six months a total relief of about 500 beds will be available. Obviously there is a shortage of physicians. It is said that great difficulty exists in getting physicians into the service, that they are not recruited from the best schools. Their training in psychiatry consists of necessarily short courses given by the State alienist and the precept of the older men in the service. Staff meetings are held in some of the institutions only. It is said that if the salaries be increased to conform to the wages of bricklayers and carpenters some of the difficulty might be removed. Suitable quarters would offer an added inducement. There seems to be a lack of assurance of definite material advancement. Obviously, the uncertainty of permanency of occupation as the result of political upheavals is not attractive. The lack of contact with medical centers and the apparent routine character of the work are additional factors which seem to be correctable. Compulsory internships in general hospitals and greater inducements of Federal service have had an effect upon the number of physicians in these institutions. There are no medical directors in these institutions. Hospital wards are a part of many institutions but frequently house the infirm and feeble. There are no full time laboratory men. Any research work which may be done is produced under adverse conditions and under pressure of other work. The serologic

work is performed at the State Psychopathic Institute. One element of stimulation is the Illinois State Hospital Medical Service Bulletin, issued by the division of the Alienist.

Nurses and attendants are insufficient in number and only about 50 nurses have had competent psychiatric and general training. There is a State school of psychiatric nursing offering three courses to women with proper qualifications, one a standard hospital course of three years, a short course of four months for senior students at general hospitals and a post-graduate course of six months for general hospital graduates.

The State Psychopathic Institute has a Director and a staff of an extramural pathologist with a technician, a serologist and a chemist. Recently the research work has been held somewhat in abeyance awaiting the completion of the new hospital buildings of the medical department of the University of Illinois. We have thus far seen that there is a lack of room, a lack of physicians, a lack of medical directors, laboratories, full time pathologists, qualified trained nurses and contact with medical centers. These faults are not the faults of the institutions, they are our faults. I know from personal experience how earnestly employes of institutions, physicians and nurses try to fulfill their duties under adverse circumstances. They do their job as well as they can. We do not give them the things to do it with.

In 1913, the Committee of Fifty published a pamphlet calling attention to the fact that there were 10,000 epileptics in Illinois and no provisions for them. They sought a colony for Illinois providing for two thousand or twenty-five hundred. Today there is an institution at Dixon and of all the patients only 190 are epileptics. There is no laboratory and as far as I know no immediate plan for one. No wonder the plan of voluntary commitment for epileptics failed! It is interesting to note in this connection that when the hospital for the insane at Columbia, South Carolina, was erected it was necessary to advertise in the newspaper for patients.

The Lincoln State School and Colony is occupied to its full capacity and it has been necessary to relieve its former congestion by the transfer of some patients to Dixon, which has likewise received some feebleminded cases from some of the hospitals for the insane. Although the medical conditions in this institution are entirely inadequate, it is only fair to call attention to the comments of Dr. Adler in his Survey of Cook County and the Mentally Handicapped, on the commendable energy of the staff of this institution and satisfactory system of education both in special classes from kindergarten grades up, in the gymnasium and in supervised recreation and in the trade shops.

In Cook County we have the Psychopathic Hospital, which constitutes the receiving service for the insane of this county. A rather important step forward has been taken in obtaining regular Cook County Hospital interns to serve three months internship in this ward. The present staff includes one superintendent, two resident physicians, one senior interne, three internes and consulting staff of six psychiatrists. The nursing service is at present as in the surgical and medical wards, under the charge of the Illinois Training School for Nurses. Weekly staff meetings are held. Two court days are now in effect. Perhaps an indication of what we do not have in this institution may be seen in the personnel of the Boston Psychopathic Hospital, with an admission of but half the number of cases. They boast of a staff consisting of a director, a chief medical officer, three executive officers who are physicians, three medical officers, four assistant medical officers, four interns, a chief of the out-patient department, two out-patient medical officers, a chief of psychological laboratory, a chief of department of therapeutic research, a chief of the biochemical laboratory, a roentgenologist, an adequate and highly trained social service department and an occupational therapeutic department.

There are three custodial institutions in Cook County, the County jail, the Juvenile Detention Home and the House of Correction, all receiving inmates either pending some other disposition or for comparatively short terms. Considerable progress has been made in the Juvenile Court procedure. The Institute for Juvenile Research has filled a great need in connection with the problems dealing with behavioristic difficulties in children. The staff of the Institute contribute to the examination of children of the Juvenile Detention Home. Other cases are sent by courts, hospitals, practitioners, schools, social agencies and some are voluntary. The social service investigates and gives social treatment to cases from the State Training School for Girls at

Geneva, the St. Charles School for Boys, the State School for the Feebleminded, the Kankakee State Hospital, the Chester State Hospital and Joliet Penitentiary. It is concerned with a number of problems of investigative nature and some attention is given to teaching.

The group of reformatory institutions consists of the St. Charles and Geneva State Reformatories for juvenile delinquents and the House of the Good Shepherd.

What the Juvenile Court does for the County in the case of juvenile offenders under the age of seventeen in the case of boys and eighteen in the case of girls, the Municipal Court in its various branches does for juniors above that age. In connection with this court is a psychopathic laboratory which, because of some personal factors, holds an isolated position from other similar organizations.

Under the Department of Education there is a department of child study whose scope of work as outlined by the Board is very broad. There are about 120 rooms, each containing nineteen pupils devoted to the mentally deficient, and forty rooms devoted to behavioristic cases. Children with an intelligence quotient below 50 are not received. These constitute about 10 per cent of the applications. Of course, markedly deficient children are not brought to school at all. Children are taught from an industrial aspect as well as educational. The general aim is to put exceptional children back into the grades, it being desirable not to isolate them from the mass. The children are selected by the teachers in the grade schools, who after observing them for forty weeks may report them as exceptional. The mental examinations are conducted by the Child Study Department, the examiners being seven psychologists. They note in a general way the condition of the eyes, ears, teeth, etc. Physical examinations are made, as on normal children, by the Department of Health and nursing service is rendered by the Department of Health school nurses, none of whom are trained psychiatric nurses. No neurologic examination is made and a comprehensive medical examination is not feasible. No psychiatrists are attached to the department. It is said that about one-fourth of the cases so taught are turned back into the grade schools. Considerable discussion is warranted as to the necessity for psychiatrists, physicians, trained nurses, trained social service workers, and the underlying principles of the feebleminded.

There is no provision for the registration of feebleminded in the State of Illinois. No idiot is capable of contracting marriage.

Some small private non-institutional agencies, as the Orthogenic Clinic of Rush Medical College, exist. In some cases the work is excellent but too isolated to perform materially important service.

It is again impressed upon us tonight that we have an Illinois Society for Mental Hygiene which serves the public in educational and propaganda work in mental health.

Social service is rendered by all institutions of the State. Out-patient clinics are held in Chicago and similar facilities are afforded some of the other districts of Illinois. These clinics are held in Chicago once a week and in Jacksonville every two weeks. There is a social service department of Cook County which serves the Psychopathic Hospital, the patients released or paroled from the Lincoln State School, the courts, the County jail, etc. Social service work is conducted in relation to neurological clinics in Chicago. So-called social work in some of the clinics and dispensaries consists large of clerical work which might be done by a $75.00 a month stenographer. For the most part the social workers in these clinics and dispensaries have no special training in psychiatry.

There are no facilities in Chicago for training psychiatric social workers.

Despite the fact that many forms of insanity are distinctly medical problems and amenable to treatment, there are no psychiatric wards in any of our general hospitals.

In the City of Chicago may be found some so-called "rest cures" for the treatment of mental disorders. In most instances these rest cures consist of an old, abandoned residence containing a number of beds. Although these institutions receive a license from the Department of Welfare, there are no requirements as to the personnel, no medical staff need be resident and the only requirement insisted upon is the facility for affording comfortable and kindly attention. It would be as logical to license special hospitals for the treatment of diabetes and require a staff consisting of any person who is kind and humane, with no laboratory facilities, no competent nurses, and no physicians. There are in the

State a number of private sanitaria which are licensed by the Department of Public Welfare and from which quarterly reports are received. The only requirement in effect, for license, is that they treat their patients humanely, and it is expected that they will conduct an ethical practice. Not more than five years ago one such institution sent circular letters to relatives of patients in State Hospitals soliciting their patronage, with promises of cure.

In none of these institutions is there a minimum requirement of equipment, nursing staff, nurses training or medical staff. None of these institutions are graded as are the general hospitals of the country.

When a physician calls for the services of a nurse to assist in the care of a mental case it is found that many nurses sign against such cases and such nurses as may not be called upon as frequently as desired to care for general cases accept such service. There is no registration of psychiatric nurses or careful notation of special training.

Within the last few years the importance of teaching psychiatry has been recognized in our medical schools. Very frequently, however, a good deal of this teaching is left to chance. Some of the schools have a minimum requirement of psychiatry training. Clinical facilities for the teaching of psychiatry, particularly as related to mental deficiency, and behavioristic defects are wanting. There remains a considerable lack of coordination in the teaching of nervous and medical schools of Chicago I know of no scholarships or fellowships which have been offered mental diseases. Speaking of two of the larger in neurology, I know of no physician who because of the inspiration of his own school has turned to neurology in the last ten years. Opportunity for research in the schools of medicine in the field of nervous and mental disease is conspicuous only by its absence. In every school may be found a large number of undergraduates and fellows working in the departments of anatomy, bacteriology, physiology, medicine and surgery, but the work in neurology occurs only in the aforementioned departments or does not occur at all.

It is my firm belief that it is to this part of the situation as to the care of nervous and mental cases that the greatest scrutiny must be applied, and that the development of the needs of the community hinges upon the education of the physician. A member of the sub-committee on mental hygiene of the Institute of Medicine has very aptly put it that "a school which cannot develop its own neurologists and psychiatrists has no use for existence."

25 East Washington Street.

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## DISCUSSION OF THE PAPERS OF DRS. MOYER, POLLOCK AND SINGER.

DR. CHARLES F. READ: While I have been particularly interested in one of the papers presented this evening, I will say that I have listened with pleasure to Dr. Singer's discussion to which I can add nothing, and have also listened with great interest to Dr. Moyer's excellent account of the care of the insane as it was in Illinois some years ago. While I know Dr. Moyer has kept in close touch with what has been done in regard to state care of the insane since he left institutional practice, I still feel that he has perhaps left us with an impression that is somewhat too pessimistic in its coloring.

While I have no quarrel whatever with Dr. Pollock's statement of conditions as they are today, and while it would ill become me as a member of the Department of Public Welfare to offer any apology for present conditions, still it might be well to point out to you a few of the hopeful conditions and accomplishments in the care of the institutional insane in Illinois during the past eight or ten years.

For instance, when I entered the service at Kankakee in 1909, even though in Dr. Moyer's time they did away to a great extent with restraint, it was not uncommon to see fifteen or twenty patients laced up in straight jackets upon a single ward. At the present time, there is no restraint in the State of Illinois. It was officially done away with a number of years ago.

As successor to Dr. Singer, I have carried on to further development the work that was begun during his time, notably in occupational therapy. For many years—in fact, as long as the institutions have existed—the insane have been industrially employed. However, only those who are willing, who have the energy to occupy themselves independently with a minimum of supervision, are thus employed. Under this new phase of therapy we are keeping some 3,000 patients occupied who because of their apparent stupidity were formerly allowed to sit about idly. They are doing something now; they are being trained and brought back to some extent to the ordinary decencies of life and to its more routine interests. This, of course, requires a corps of workers trained, and untrained in each institution.

So, too, with social service much has been accomplished. Here in Chicago we have in the department at the Chicago State Hospital a chief worker, with four or five assistants who make thousands of calls each year upon the homes of paroled patients as well as the homes of patients who are still in the institution, but who are worried about affairs at home. They take care of little legal matters, they investigate prior

to parole to see if the home is a fit one, with a doctor they hold clinics each week in some part of the city, etc., and this same work is done all over the state to a greater or less extent. While we carry not a great many more out upon parole than we used to, they are receiving better care because they are supervised to some exteat, and the public is being better protected. A patient is returned to the institution if he is not doing well or we are fearful he might do some actual harm.

Recently I have been investigating the mortality rate from tuberculosis in our state institutions, thinking it would be a good argument for more buildings, if I found there were more deaths from tuberculosis on account of overcrowding, but to my great surprise I found the death rate much lower than it used to be. Errors have crept into these statistics no doubt; some cases that formerly were signed out as tuberculosis are probably now signed out under other causes. *But along with that for tuberculosis the general mortality rate is falling.* Tuberculosis pavilions in the last ten years have been established in practically every institution of the state. Only one at the present time is lacking and that is right here in Chicago.

Over 3,000 beds have been added in the last ten years—1,000 of these for the feeble-minded—not enough I grant, but a very considerable number at that. At Elgin a hospital ward has recently been opened that would do credit to a town of ten thousand, and at Alton another similar one is about completed.

Just last year a building was constructed for ex-service men at Elgin, housing 200 patients. One is under construction at Jacksonville of the same character. The Veterans Bureau is training these men in different ways.

You perhaps know of the hospital block that is being built at the Cubs Park in connection with the University of Chicago. In time it will house the Psychopathic Hospital and afford means of training students in psychiatry and for research along this line.

If you wish to interest doctors in psychiatry, I would suggest that you get behind a bill requiring the subject of psychiatry to be placed in the state board examinations. At the present time students naturally do not take psychiatry very seriously. Such a bill goes into effect in Massachusetts this year.

Nurses training schools have their place in every hospital. Unfortunately we do not get enough pupils, but we are doing everything we can to get them. We have not as many doctors as we should have. I have been doing my best for many months to fill up the ranks so far as salary funds would permit. It has been hard to get them, although the salary includes maintenance, thus making the pay really better than what the average bricklayer gets.

I do not know how we will get more money for our institutions unless we have a bond issue as has been done in an eastern state recently. If we have bond issues for good roads, why not have bond issues for good minds. That seems logical.

There institutions are your institutions. They are medical institutions and I ask you to take an interest in them. If things are not going right step in and help us to make them right.

DR. LEWIS J. POLLOCK (closing): Dr. Read need not offer any apology because I stated distinctly that the staffs of the State Institutions have put forth a Herculean effort in caring for the inmates with what imperfect facilities and inadequate staffs they possess. The physicians of the state institutions are as competent and as conscientious as physicians engaged in general practice but additional facilities are necessary for good service.

I do not mean to say that no progress has been made. Much progress has been made but it has been largely of an institutional character whereas advancement of an investigative character is necessary.

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## METAPHYSICAL MEDICINE

OR

### TWO THOUSAND YEARS OF FAITH CURES

W. A. HINCKLE, M. D.

PEORIA, ILL.

Since first the finger of time began recording the aims and deeds of men on the pages of history, two omnipresent desires have possessed him; viz, to prolong his life and to relieve his sufferings.

To attain these much desired ends he has resorted to two classes of measures or medicines, physical and metaphysical. His physical medicines have consisted of such material things and methods as directly affected the body, e. g., food and drink, heat and cold, manipulations and massage, drugs and electricity, and many others. His metaphysical medicines have consisted of prayer, sacrifice, exorcism, penance, charms, amulets, faith cures, laying on of hands, annointing with oil, and such methods as affected the body only indirectly, if at all.

Whether physical or metaphysical medicines were used depended largely upon the prevailing theory as to the cause and nature of disease. In ancient times when man was prone to attribute all things he could not understand to supernatural causes, he looked upon sickness, disease and death as due to the anger of the gods, or machinations of the devils.

This theory of disease was almost universally accepted. It is taught in the Bible, was accepted by Jesus and his apostles, affirmed by Popes, theologians and ecclesiastics for more than a thousand years. It was firmly believed by Martin Luther, John Calvin, John Knox, and other leaders of the Reformation. Even so late as the

eighteenth century, John Wesley, the founder of Methodism, treated the sick by trying to cast out devils through prayer.

Devils were supposed to produce disease by acting upon the victim from without, either directly or through a third party known as a witch; or he entered the individual and worked from within. Entrance was usually effected through the mouth with food, drink or the breath. The latter was especially apt to occur if one slept with his mouth open. To avoid this catastrophe, exorcists, when casting out devils, were always careful to keep their mouths closed.

Charles II of Spain, who died A. D. 1700, never went to sleep without his confessor and two friars in the room with him to protect him from demoniacal obsession.

Various methods of exorcism or casting out of devils were tried during the long centuries in which this form of metaphysical medicine was in vogue. Sometimes the offending devil was commanded in the name of Jesus to come out; again the exorcist tried to humiliate the demon and shame him out by calling him foul and disgusting names—this, on the theory that pride was one of the chief characteristics of devils. As a last resort, torture, even burning at the stake, was used, hoping thereby to inflict suffering on the evil one.

For more than a thousand years after the beginning of the Christian Era, such metaphysical medicine was the prevailing method of treating the sick, and many were the supposed cures that were offered as proof of the theory that disease was due to angry gods, wicked witches and dirty devils.

The priests, supposedly having special influence with Diety and being the avowed opponents of devils, naturally became the recognized healers of the sick. The few who sought to cure disease by physical methods were discouraged in ways most emphatic by priest and church.

However, with increasing intelligence, devils became less numerous and powerful and finally, ceased to cause disease. Then exorcism made way for other forms of metaphysical medicine. Shrines and holy places became the great healing agencies. Objects that had been intimately associated with some holy person or place were supposed to partake of their virtues. So, such things as oil from altar lamps, water from sacred springs and bones of saints became possessed of healing virtues.

Especially efficacious were those relics brought back by pilgrims and crusaders from the Holy Land. Wood and nails from the cross of Christ; blood and tears of Jesus and Mary; toe nails of St. Peter; links of the chain which bound St. Peter and St. Paul; and many other such sacred relics were plentiful throughout Christendom. Many and marvelous were the cures claimed for them.

In the days when this form of metaphysical medicine was in flower, there was in Europe enough wood and nails from the cross to have built a chapel. There were literally barrels of the blood of Jesus and Mary. There was more than a bushel of toe nails of St. Peter. Numberless were the links of the chains that bound the Apostles. There were no less than eight different thigh bones of the Virgin Mary in eight different cathedrals in Europe.

Of all the healing shrines and holy places once pervading Christendom, only three retain some of their ancient healing virtues. These are, St. Anne in Quebec and Lasalette and Lourdes in France, and cures at these grow less with the passing of the years.

The story of Lourdes, the greatest of the shrines, is typical. In the year A. D. 1858 Bernadette, a 14-year old child was playing amid the quarries in the little village of Lourdes in France. She saw, or thought she saw, a beautiful woman who smiled at her. In the next few months Bernadette saw the apparition 18 times. On several occasions it spoke to her. No one else saw the vision or heard the voice, though others were with the child when she saw and heard. Then other unusual things occurred. Several sick people drank of the spring that was there and were cured. The wondrous news was broadcast. Lourdes became famous. The curious, the sick, the afflicted came, and still come, more than a quarter of a million annually. A few of the sick are cured. Most of them are not. Catholic authorities claim only about four thousand authentic cures among the more than ten million pilgrims who have journeyed there in fifty years. One cure for every twenty-five hundred persons who visited the shrine. Of course not all the visitors were sick, so we do not know the percentage of cures. Lourdes is the one place of its kind where those in charge appar-

ently have made some effort to verify the results, and avoid exaggerations. Hence, the relatively small number of cures.

Coincident with holy relics and sacred places was another form of metaphysical medicine. The sacred person of the King or Queen possessed in a measure the healing virtues of other sacred things. So, for seven hundred years the kings and queens of England and France were reputed to cure by the royal touch, such diseases as kings' evil or scrofula, and falling sickness or epilepsy. The efficacy of this treatment was not only implicity believed by the masses but was affirmed by privy councils, by bishops of both the Catholic and the Protestant churches, and by the University of Oxford. The last person to be so treated was Dr. Samuel Johnson, who when four years of age, was touched by Queen Anne. The treatment in his case was a failure, and that which had been gradually falling into disrepute was abandoned entirely. In its day of grace many were the cures wrought by the royal touch.

But people will have their little superstitions. As increasing intelligence emasculated the cruder forms, new varieties of metaphysical medicine took their places. Enter then the divine healers. These were for the most part pious men and sincere, who proved by the Scriptures that prayer, laying on of hands and annointing with oil are all-sufficient for the relief of human ills. Hundreds of such healers have had their brief and brilliant day.

Prince Hohenlohe (1794-1840) was probably the greatest divine healer of recent centuries. A priest and devout man, he had implicit faith in the power of prayer. Among his early cures was a princess of the house of Schwarzenberg. The prominence of the patient, as well as that of the healer, gave him great notoriety and instant fame. The sick came to him from all Central Europe and many were they who professed a cure. He is said to have treated 18,000 people the last year of his life.

In America, one Francis Schlatter, an Alsatian priest, wrought many similar cures. Gifted with a countenance much like the traditional features of the Christ, he wandered barefoot and barehead through the Western country. Many sick received his blessing and proclaimed themselves cured. After forty days fast and purification, he went to Denver where he ministered unto thousands from over all the U. S. Of these many claimed to be cured. After Denver his healing powers grew less and he soon passed from the public eye.

Another divine healer was John Alexander Dowie. Proclaiming himself the reincarnation of Elijah and the restorer of true Christianity, he founded the Christian Apostolic Church. In a booklet entitled, "Doctors, Druggists, and Devils," he reaffirmed the old Biblical teachings that demons produce disease, and that prayer and the laying on of hands is God's method of cure. He gathered thousands into his fold, who bore witness of his healing powers. Then the Devil of disease called him at the age of sixty.

Contemporary with John Alexander Dowie was Mary Baker G. Eddy, the founder of Christian Science. She began her career as a patient and disciple of Quimby, the noted mental healer. Later she modified his theories somewhat. As a healer she seemed to have been a failure though she taught many who were more successful than she. Like many other metaphysical healers, Mrs. Eddy proclaimed her teachings were in harmony with, and complementary to the Bible. Her theories of disease, however, differ materially from that of other systems of healing based on Divine Revelation.

She denied the existence of all the physical world, consequently of the physical body and its disorders and dissolution, known as disease and death. She also denied the reliability of the physical senses which tell us that these things do exist and are real. The things we see, hear, feel, taste, and smell, she affirmed, are but delusions of a mysterious something she calls mortal mind. While emphatically denying the reality of sickness and death, Mrs. Eddy sickened and died, much younger than many who believe in the reality of these things.

By denying sickness and death and affirming health and life, thousands of Christian Scientists claim to have been cured of divers delusory diseases. Yet to date, they have not been able to demonstrate the truth of their theory that the physical world is not real by living without or above it; or even to prove that sickness and disease are delusions of mortal mind by living longer than the average span allotted to man.

Other forms of metaphysical medicine, not based upon religion or the Bible, were co-existent with the divine healers. Mesmer (1733-1815), a German physician, conceived the theory that disease is due to alterations of the animal mag-

netism which he supposed pervaded and animated the body. Cures were effected by making passes with his hands over the patient's body, thus drawing off the bad magnetism. His theories appealed to the popular imagination. Multitudes flocked unto him and many professed being cured.

His services were in such demand that he could not give all who came his personal attention, so they were treated by his valet, with results little less remarkable than those of the master.

Mesmer went to Paris where the multitudes received him gladly. Here he built his wonderful magnetic trough. It was some thirty feet in diameter and contained ground glass and iron filings. Around the trough sat the sick. Each held with one hand one of the thirty handles attached to the trough, and with the other hand made magnetic connection with the adjacent patient. A dimly lighted room, burning incense, and low soft music, completed the equipment. After a while the sitters felt a magnetic current creeping up their arms and pervading their bodies, i. e., some of them did. Then they passed into a magnetic sleep or a cataleptic state from which they awakened freed from their disability, i. e., some of them did.

So great became the popularity of Mesmer and his methods that the king appointed a joint committee from the Academy of Science and the Faculty of Medicine of Paris, to investigate and report on this wonderful new form of medicine. On this committee was one, Benjamin Franklin, who knew a few things about electricity and magnetism. After five months of investigation and deliberation, they reported that there was no evidence of any magnetic action or effect, and whatever cures there were, were due to imagination and not to magnetism. A similar report was made by the Berlin Academy of Science. After publication of these reports, Mesmer was no longer able to produce his once marvelous results.

Mesmer's most famous pupil, Marquis de Purysegur, simplified his master's technique. He magnetized a tree, and those who sat beneath its spreading boughs were subjected to its healing aura and were cured, i. e., some of them were.

About this time a Connecticut Yankee, Elisha Perkins by name (1741-99), invented a wonderful instrument known as the Perkins' tractor. It was made of gold and silver, iron and brass. In shape it was somewhat like a pair of calipers. By passing this unique instrument over the sick he drew from them the bad magnetism and so cured their disease. So marvelous were his results that the Society of Friends built a hospital known as the Perkins Institute where the poor sick and afflicted were demagnetized and remagnetized a la Perkins.

Came then another Yankee who made a tractor of wood with which he produced results equal to those of Perkins. Exit Perkins and his tractor.

The interest created and the results obtained by Mesmer and his followers led Dr. Braid (1795-1860), an English surgeon, to investigate these and similar phenomena. After much study and experimentation, he advanced the theory, now generally accepted, that the cures, sleep, and cataleptic state produced by mesmerists were in no wise due to the so-called mesmeric passes and supposed magnetic aura induced, but were due entirely to the state of mind induced in the subject. By having the subject fix his eyes and attention on some object held slightly above the normal line of vision, and by telling him firmly, gently and repeatedly, that he was going to sleep, Braid succeeded in inducing conditions and cures similar to those produced by Mesmer. This method Braid called hypnotism.

So we might continue at great length showing that every age has had its metaphysical medicine and healers. After making due allowance for deception, exaggeration and misinformation, we must admit that all these multifarious methods have cured many and failed on more. All of them have offered their cures as proof of the truth of their theories.

But, do cures prove the healer's theories? Did the cures made by exorcists prove that disease is due to devils? Did the cures made by Mesmer prove that sickness is due to disordered animal magnetism? Did the cures made by Dowie prove that he was the re-incarnation of Elijah? Do the cures made at Lourdes prove that the Virgin Mary actually appeared and talked to Bernadette? Do the cures made by Christian Scientists prove that the patient was not really sick and that matter, disease and death are but delusions of mortal mind?

No, cures neither prove nor disprove the theories of the healers. The cures prove only

this: The patient recovered. All the discredited and discarded forms of metaphysical medicine show that the theory need not be true in order to produce results, for all have cures to their credit. Many were they who once were cured at the tomb and shrine of St. Rosalie at Palermo. Nor did these cures cease till long after Professor Buckland, the eminent osteologist, declared these sacred bones were not those of the good woman, but were those of a goat.

These facts only emphasize the observations of Paracelsus made centuries ago, that it matters not if the object of one's faith be false or true, the effect upon the worshiper is the same. In other words, the results come from inside and not from outside the worshiper.

How can we explain these similar cures and antagnostic theories of the various forms of metaphysical medicine? The answer is to be found in the power of suggestion over the mind, and the influence of the mind over the body. Suggestion as here used is anything that influences the mental attitude of the individual. The things we see, hear, feel, taste, and smell, all suggest to us, all help to determine our state of mind.

That the mind in turn affects the body is a fact well known, though often overlooked and underestimated. Examples of such are everyday experiences. Embarrassment causes the cheeks to flush and fear causes them to pale; grief fills the eyes with tears and joy transfigures the face; fright causes the limbs to tremble and the body to shake; excitement makes the heart flutter. Various mental states influence appetite and digestion, produce headaches and insomnia, and affect the bodily functions generally.

These results are transitory if the mental state inducing them is transient. But just as such temporary mental causes produce temporary physical results, so, also, prolonged mental states produce prolonged or chronic alteration in bodily function. Chronic beliefs, fears, griefs, hates, and other emotions are undoubtedly responsible for many chronic disorders; yet the patient may be entirely unconscious of the mental cause of his disease, or even of the existence of the mental cause.

The subconscious mind is the store house of our chronic emotions. Deep in its fathomless depths lie buried emotions and memories long suppressed and apparently forgotten. Nature stores them there to relieve the tension on the conscious mind; but they still exist. As Professor Bergson says: "All our past life is there, preserved even to the most infinitesimal detail, and that we forget nothing, and that all we have felt, perceived, thought, willed, from the first awakening of our consciousness survives indestructibly."

Unrecognized by us these indestructible subconscious memories and emotions act and react continuously upon our bodies, through the sympathetic or involuntary nerve centers, producing disease or promoting health. Various scientific methods of utilizing these hidden forces have been developed which are devoid of the supernatural and the superstitions, and do not resort to silly sophistries or pseudo-scientific explanations.

At Nancy, France, has grown up a great institution devoted to scientific metaphysical medicine. Here, under the supervision of able physicians, cures have been wrought through the influence of the mind, that are analogous in all important particulars to so-called supernatural cures.

Here hypnotism has been investigated and developed, and through it much light has been thrown on the subtle workings of suggestion over mind and body. Briefly, hypnotism is an induced state of passive attention in which the subject's consciousness, reason, judgment and will are diminished and his imagination and susceptibility to suggestion correspondingly increased. The variation of these mental functions from the normal depends upon the stage of hypnosis. This may be so slight that the subject is vaguely conscious of what transpires, or so deep that he is oblivious to all.

In hypnosis the subject's consciousness, reason, judgment and will being diminished and his imagination and susceptibility to suggestion increased, he more readily believes what he is told. Tell him he is a dog and he accepts the suggestion and acts like one. Tell him he is sick or well and he believes, feels and acts accordingly. If sufficiently impressed upon him, the suggestion will continue to influence his mind and body even after he is no longer under the hypnotic spell.

Hypnotism is one method of making a strong and lasting impression on the mind. It is a way of circumventing reason and judgment, which

normally stand like sentries at the threshold of memory and determine what may enter there.

As might be suspected, suggestion bolstered by supernatural claims, supported by Scriptural quotations or ecclesiastical authority, will also make profound and lasting impression. These also sometimes circumvent reason and judgment by claiming superiority over them. This is why those forms of metaphysical medicines which have a religious flavor have usually been more popular and effective.

But regardless of the theory advanced or the method employed, all forms of metaphysical medicine produce their results through the power of suggestion over the mind, and the influence of the mind over the body.

That some of the results following physical methods are due to suggestion is recognized by all physicians. But no physical medicine can long endure that depends on suggestion alone for its results. Countless such have had their day and now lie buried with the many metaphysical fads in the junk heap of discredited delusions. And still there are more to follow. When the last goat gland and patient have been grafted, other forms of physical suggestion will arise and attempt the impossible. But surviving the vicissitudes of time and change, certain physical medicines still give the same good results today as they did a thousand years ago.

From this same town of Nancy came Coue who recently attracted much attention in America. He is but one of a great number of metaphysical healers who, by various methods, call out the latent powers of the mind. Reared in the psychic atmosphere of that place, Coue absorbed the theory and developed a method of self or auto-suggestion, that makes no claim to the supernatural or the miraculous. By tying twenty knots in a string, and by saying night and morning, once for each knot, "Day by day in every way I am getting better and better," the patient repeatedly suggests to himself and thereby makes a more lasting impression on his subconscious mind.

Not being versed in scientific medicine, Coue makes many absurd and impossible diagnoses and exaggerated claims of cures. Like all exclusively metaphysical healers, he claims too much. He mistakes a part of truth for the whole of it.

Herein lies the secret of the passing of all the great galaxy of metaphysical healers and methods that momentarily have lighted the therapeutic sky. They see the great truth that the mind influences the body and sometimes produces disease. But they fail or refuse to see the greater fact that the body influences the mind, or the still greater fact, that environment or the external world influences both body and mind, and is responsible for most of human ailments. If you doubt that the physical influences the mental, just try to concentrate when you are cold or hungry, or have a headache or are sick at your stomach.

That most human ills are of physical origin should be evident to any who will but investigate. That all accidents and injuries are of physical origin can hardly be denied. That all infectious and contagious diseases are of physical origin has, and can be, demonstrated beyond cavil by any one with sufficient scientific training to follow scientific experiments. If to accidents, injuries, contagions, and infections, we add those conditions clearly due to exposure, dissipation, and unsanitary and unhygienic living, we have by far the majority of human ailments, all due to physical causes.

That physical methods should be the basic treatment for all disease of physical origin seems obvious. To treat a broken leg, a decayed tooth, a rotten appendix or any infection or inflammation, by purely metaphysical methods would be as absurd as to treat grief, disappointment, fear, or heartache with powders or pills.

It by no means follows that metaphysical medicine is entirely valueless in diseases due to physical causes, or that physical medicine is of no avail in conditions of metaphysical origin. Most diseases, especially those which have become chronic, are a complex of both physical and metaphysical disability. One becomes engrafted on the other, thus becoming a secondary cause which aggravates the primary condition. Many diseases may be benefitted temporarily by either metaphysical or physical medicine; but only by removing the cause can the patient be cured.

Modern scientific physicians do not object to metaphysical medicine, but to metaphysical doctors who try to deny and disregard the necessity for physical medicine in physically caused conditions. As a matter of fact, all these so-called physicians are inconsistent. Even the most radical do not disdain the services of surgeons, dentists, oculists, and undertakers. Their in-

ability to diagnose, and reluctance to report contagious diseases, and their tendency to avoid quarantine makes the average metaphysical healer a menace to the community.

Knowledge of disease is indispensable to all who presume to treat the sick by any method. One cannot know the value of any method of treatment who cannot diagnose, and who does not know the course a given disease will probably run, and its termination if left untreated.

Before we can know the value of our treatment in a sore throat, we must know if the disorder is merely a simple inflammation or is a diphtheria. If it is a simple inflammation, in practically all cases, it will run its course and get well in a few days even if left untreated. If it is diphtheria, it will run a different course and about 30 per cent. will die if not properly treated. If under antitoxin or any other treatment 90 per cent. instead of 70 per cent. recover, and if all run a milder course under such treatment, then we can justly claim that the treatment cured 20 per cent that otherwise would have died, and benefitted all of the 90 per cent. But no such claim can truthfully be made unless one can diagnose.

Similarly one must be able to differentiate a cold on the chest from pneumonia; a chronic bronchitis from tuberculosis; measles from scarlet fever; chickenpox from smallpox; and so on all down the list, if one is to know the value of any line of treatment. Such conclusions must also be based on a large number of cases to obviate the possibility of chance.

Statistics, based on accurate diagnosis and unbiased observation of results, are to be had only from medical sources. The various cults that proclaim miraculous results base their claims for the most part on mere conjecture. They offer no accurate statistics, and their inability to diagnose, and their ignorance of the natural course of disease, precludes any possibility of such reliable information.

Statistics show that about 90 per cent. of all acute sickness will ultimately recover even if left untreated, but that a still higher percentage will recover in a shorter time and with fewer complications if properly treated. Thus we see that any method of treatment, however worthless, should show at least 90 per cent of cures in such cases. This natural tendency of the body to recover when sick or injured has enabled many worthless forms of metaphysical as well as physical medicine to get by for a time. What wonderful possibilities for much reputation with little or no merit! What a fertile field for ignorance, deception and quackery!

No more striking demonstrations of relative merit could be asked, than a comparision of the results of modern physical medicine during the last hundred years, with the previous two thousand years of metaphysical healing.

Under the various forms of metaphysical medicine that dominated the therapeutic world for more than twenty centuries, plagues and epidemics devastated the land. Malaria killed its thousands and typhoid slowly burned to death its tens of thousands. Smallpox spread like a prairie fire over the earth, depopulating cities and devastating the country side. Yellow fever paid its annual visit to the tropics reaping its frightful harvest of death. Cholera swept the earth like a typhoon, leaving death and disaster in its trail. Time and again the black death, now known as the bubonic plague, inundated the land like a great tidal wave and struck terror in the hearts of the human race. In the fourteenth century it broke out in China, killing sixteen million. It followed the caravan route from China to the West. It passed through Asia Minor and all of Europe, leaving a trail marked by the bones of twenty-five millions in Europe alone.

In vain all the arts of metaphysical medicine were tried during the course of the centuries in an effort to eliminate these ever recuring epidemics. In spite of prayers and sacrifices, of charms and amulets, of penance and exorcisms, shrines and holy places, the laying on of pious hands and annointing with holy oil, in spite of persecuted heretics and burning witches, the demon of disease still roamed the land at will. The earth was one vast charnel house and one-third of all children died before two years of age.

Came then, modern scientific physical medicine. In less than a century it discovered the physical cause of these frightful diseases and banished them from civilization. It discovered and eliminated the mosquito as a cause of disease, and malaria and yellow fever are now less feared than the early frost. It learned the secret of their source, and now smallpox and cholera and the black death are far less fatal than automo-

bile accidents. In all previous wars, typhoid was more deadly than sword and cannon, but in the latest and greatest war fewer died from this than died from fright.

For centuries, Cuba and the Philippines were pest holes of disease and death; and in Panama, the death rate was so high that the French, after spending millions, were compelled to abandon the partially completed canal. In less than a quarter of a century, under modern physical medicine, these countries have been freed from epidemics, and America built the Panama canal, with a death rate less than that in New York City.

In less than a century physical medicine has reduced the infant death rate more than one-half, and has added ten years to the life of the average man. All this in spite of the statement of one of the most noted metaphysical healers that where there are more doctors and more thought given to sanitation, there is more disease and death.

What think you wrought these modern miracles? Were they brought about by belief in those antiquated theories, that disease is due to angry gods, wicked witches or dirty devils? or to that more modern sophistry that would have us believe that the physical body, with all its reactions to heat and cold, hunger and thirst, sickness, disease and ultimate death, are but delusions of mortal mind? or to that more modern method of self-kidding, which teaches us to say, "Day by day in every way we are getting better and better" whether we are or not?

No! History fails to record one plague that has ever been stamped out, one epidemic that has been eliminated, one pest hole made fit for human habitation, any reduction of infant mortality, or any increase of human longevity, made by any form of metaphysical medicine, at any time or place.

So to answer the age old question that has been asked for thrice a thousand years, how may we best prolong life and relieve human suffering, if we would not deceive ourselves we must say: Seek ye first the physical cause of disease, for so long as we lead a physical life with a physical body, in a physical world, most diseases will be of physical origin and respond best to physical treatment.

Of course, we must recognize and utilize the influence of the mind over the body. But we must not forget the greater influence of the body over the mind, or the still greater influence of environment or the external world over both body and mind. We do well to lift our eyes unto the skies, and to study the stars, but we must keep our feet firmly fixed upon the solid ground. If we would safetly sail the uncertain metaphysical seas, we must direct our course by the stars of reason and experience, or we must keep in sight of the land of demonstrated facts.

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## A PEDUNCULATED WART SIMULATING RENAL CALCULUS

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The report of a tumor mass simulating a renal calculus shadow has been previously made.[1] The following case is thought to be of interest because of the location of the pseudo-calculus:

Mrs. B. C., aged 57 years, entered the Presbyterian Hospital, January 2, 1923, complaining of chills and fever, frequent painful urination and pain in the region of the left kidney.

Her temperature on admission was 101 degrees. Laboratory examination showed a white cell count of 14,800; hemoglobin, 56 per cent., and a red cell count of 3,650,000. The urine had a specific gravity of 1.022. There was a slight trace of nucleo-albumin and many leucocytes. Physical examination was negative with the exception of tenderness in the left lumbar region.

The history as to duration of the illness was vague. An x-ray examination was made to rule out a possible kidney calculus.

The following report was made: "Two dense shadows are present at the level of the third lumbar vertebra; one is oval in shape and 23 m.m. long—the other is somewhat triangular in form and is 1 c.m. wide at its broadest diameter." These shadows strongly suggest stones in the kidney pelvis.

The next day a kidney function test and ureteral catheterization was done by Dr. R. Herbst, with the following result: "Left kidney, twenty cells; right kidney, ten cells. Urine appears from right ureter in five minutes—from left ureter in twenty-five minutes. Phenolsulphonephthalein test showed elimination of thirty per cent. from right kidney in forty-five minutes

1. N. G. Alcock: Jour. of Roentgenology, 1918.

and ten per cent. from left kidney in the same time."

A shadowgraph catheter was passed and an x-ray taken; the report is as follows: "Film of January 3 shows catheter on the left, upward to the level of the dense shadow reported in previous examination. The tip lies mesial ½ c.m." These shadows strongly suggest stones in the kidney pelvis.

The clinical and laboratory findings in this case were very suggestive of renal stone with in-

**Fig. 1. Shadow of Pseudo-Calculus**

fection. Our attention, however, was directed to a large pedunculated wart on the left lumbar region of the patient and of the possibility of it being the cause of the shadow seen in x-ray. Acting on this suspicion the wart was ligated at its base and removed. An x-ray was taken and the film showed an absence of the suspected calculus, the shadow of the ligature remaining.

The diagnosis of cystitis was made; the patient made an uneventful recovery, being discharged from the hospital January 14, 1923, much improved.

## SOME CONSOLATION

A rich man, lying on his death bed, called his chauffeur who had been in his service for years, and said:

"Ah, Sykes, I am going on a long and rugged journey, worse than ever you drove me."

"Well, sir," consoled the chauffeur, "there's one comfort, it's all down hill."

## MEDICAL MEN DO NOT SEE THE TREND OF AFFAIRS

It is a strange thing that many medical men do not seem to see the trend of affairs as it pertains to the growth of the socializing of medicine. We are beginning to realize the dangers of the free service offered by hospitals and clinics supported by federal, state or municipal taxation, to say nothing of the free service given by various charitable or benevolent institutions, and we know that the scope of the public health service is branching out so that it more and more includes the work now done by the private practitioner of medicine. We also have noted the tendency on the part of large corporations and industrial concerns to furnish medical and surgical services free or at a very nominal cost to their employees, and now we learn that a movement is on foot whereby some of the Boards of Education will furnish free medical and surgical services to the attendants in our public schools. It is well for the medical man as well as the public to heed the sign, "Stop, Look and Listen." This Utopian dream of the socialistically inclined, if brought to a reality, is bound to end disastrously. It is not alone the question of self-preservation that leads medical men to oppose the insidious growth of these socialistic tendencies or an abiding faith in the principle. The paternalistic form of government toward which we are drifting never has and never will prove successful. The greatest advances have been made through independent individual effort, and whenever you create dependency and take away the incentive to work you in a large measure destroy productivity and real progress. Everything that is done to advance the socializing of medicine has aided in fostering dependency, and a loss of self-respect on the part of our people, to say nothing of destroying that incentive which draws some of the best minds into the study and practice of a science that requires something more than the machine-like activity of a salaried employee. Let us have an expansion of our facilities for medical education, a broadening of the requirements for medical practice, and suitable protection of the public against incompetency and knavery by protecting us from any scheme that will destroy individualism.—*Journal Indiana State Medical Association.*

## ON POSTMORTEM AUTOLYSIS OF THE ADRENAL CORTEX

The adrenals of eighty patients were examined after death from various diseases. The authors concluded that, when the secretion was obtained within the first ten hours, degenerative changes did not take place in the adrenals, but that they did occur when autopsy was longer delayed. Seventy-five per cent. of the cases were of infectious disease, from which they infer that degeneration of the adrenal cells frequently takes place in infections, becoming manifest after death in an acceleration of the autolytic process, resembling that of the kidneys in cases of sepsis and of the liver in acute hepatic atrophy. The adrenals of children during the first months of life are singularly resistant to

postmortem changes. The statement so frequently repeated of late in the literature as to degeneration of the adrenals in infectious diseases plainly fails to take sufficiently into account the manifestations of autolytic pseudonecrosis, whereby the latter is liable to be confused with simple tissue necrosis, the more so since the two are very difficult to distinguish histologically.—E. J. Kraus and L. Lussig (*Virchow's Archiv für Pathologische Anatomie und Physiologie*, 1922, 237:265.

### THE MEDICINAL STATUS OF ALCOHOL

*Collier's* for April 7, 1923, published an article by Samuel Hopkins Adams concerning what science has to say about alcohol, and brushing aside all sentiment in the matter and considering an analysis of facts, the following conclusions are given:

1. The use of alcohol as a beverage except in immoderate quantities does not tend to shorten human life.

2. Lacking sufficient human data, and insofar as biological experiments can determine, the offspring of a strongly alcoholized strain are distinctly and comprehensively superior to the same breed unalcoholized.

3. That alcoholized subjects (chickens) are almost invariably hardier, more resistant to disease than non-alcoholized.

The conclusions are based upon statistics and investigations made by Dr. Raymond Perl, who is one of the leading biological statisticians of the world, and is now connected with the Johns Hopkins School of Hygiene and Public Health. It is stated that Dr. Perl is not concerned with controversy or opinion except as it may affect evidence. He is concerned with ascertainable, demonstrable facts and reckonable probabilities. He is not a propagandist but a scientist, and, as Adams says, Dr. Perl's biological and statistical findings seem likely to modify radically the prevailing conception of alcohol as a physiological agent.

### THOSE HARMLESS SHAFTS

In the March issue of the *Medical Sentinel* we ventured to classify as "harmless shafts" the digs that the medical profession has been receiving in the Hearst publications from one Paul H. DeKruif. Perhaps this non-pessimistic view was adopted by the writer thereof because of his natural disposition to take things with philosophy as they come. It may be that this attitude is not a wise one. Our good friend, Dr. O. E. Patterson, of Joseph, Oregon, takes exception to the attitude of the *Sentinel* as to the Hearst attacks. He says that all "these attacks have an effect. These things will have their reaction by the time the next generation of doctors come on, but in the meantime we have lost several dollars and much in disposition." The doctor thinks also that the physicians of the country should show more of a disposition to fight the enemy in the camp, and outside the camp. It is undoubtedly a fact that articles in the public press that contain misrepresentations of the work that is being accomplished by the medical profession, couched in terms of sensational exaggeration, are working a direct injury to the community in general. They tend to exasperate the members of the profession, who see their falsity—see that the sensational tirades are written solely to secure a market for the writings, and to bring dollars to the coffers of writer and publisher. It is true that many a publication has no regard whatever for the truth of what it publishers, so long as it gets material that will please the groundlings and bring dollars to the publisher.—Editorial in *Medical Sentinel.*

## Society Proceedings

### OGLE AND LEE COUNTIES

A joint meeting and picnic of the Ogle and Lee County Medical Societies was held at Lowell Park near Dixon, July 26. About seventy-five members and their families were present to enjoy the open air entertainment.

Dr. W. E. Kittler, president of the Ogle County Society, made the opening address.

Dr. Edward Ochsner of Chicago, gave a very able talk on some problems in "Medical Economics."

Dr. E. S. Murphy of Dixon in his capable way spoke of the essentials in the "Treatment of Placenta Previa."

Dr. Dornblaser of Amboy, Dr. Sloan of Bloomington and Dr. Pennerman of Rockford also gave brief discussions on the preceding subjects.

Following the scientific program was a sports entertainment consisting of a ball game and footraces.

The last and most important part of the program was a scramble supper arranged by the Ladies' Committee. E. C. White, M. D., Sec.

### PIKE COUNTY

The Pike County Medical Society met in Barry, July 26, 1923. After a fine chicken dinner, which Barry members know just how to serve, the Society adjourned to the G. A. R. hall and twenty-three physicians were found to be present. After reading and adopting the minutes of the last meeting, a memorial was read by the Secretary, commemorating the loss by death of six prominent members of the Society in the last several months: Doctors H. D. Fortune of Pleasant Hill, Dunne of Perry, Skinner and Watson of Griggsville, R. O. Smith of Pittsfield and Beavers of Barry.

A committee of Censors was appointed by the president, Dr. J. I. Doss and after thorough investigation, reported favorably on the candidacy of Dr. L. H. Davis of Perry who was unanimously received as a member.

Dr. H. P. Beirue of Quincy then read a paper on "An Account of My Stewardship." This paper took up at length the legislative problems which have confronted the Illinois physicians for the last several years and which have been solved by the

passing of a satisfactory Medical Practice Act.

The Councilor also touched upon a number of related subjects, which sooner or later, must receive attention, not only from the Societies but the public, as well.

Dr. Hardesty of Hannibal, Mo., a guest of the Society, then read a very scientific and critical paper on "Intussusception."

Dr. Carl Black of Jacksonville read a very comprehensive and scholarly paper on "Some Complications of Appendicitis." He prefaced his paper by some narratives of amusing as well as pathetic interest.

Dr. W. E. Shastid of Pittsfield spoke on "An Ocular Procedure of the South Seas," being the narrative of some eye-methods of the semi-civilized tribes of the South Pacific.

Dr. W. F. Reynolds of Barry then read a carefully prepared paper on "Constipation," which received much discussion from members present.

The Society then adjourned to meet in Milton at the next regular session.

William E. Shastid, Secretary.

## Marriages

FLORENCE MAE FOWLER, Chicago, to Mr. Emmanuel H. Kuttner of Lombard, Ill., August 4.

JESSE ROBERT GERSTLEY to Miss Adelaide Frances Kohn, both of Chicago, July 25.

JACOB ROSCOE HARRY, Chicago, to Miss Helen Louise Hurley of Mount Carroll, Ill., July 28.

HERBERT PAYNE MILLER, Rock Island, Ill., to Miss Glea M. Gray of Portage, Wis., June 30.

ANDREW DANIEL SCHICK to Miss Lemma Horne, both of Chicago, July 18.

## Personals

Dr. Ralph McReynolds has been elected president of the Blessing Hospital, Quincy.

Dr. Pierre A. Steele has been appointed medical director of the Macon County Tuberculosis Sanatorium, Decatur.

Dr. Joseph Springer, who recently resigned as coroner's physician, has been reappointed physician in charge of murder investigations.

Dr. Hertha Kraus, commissioner of public welfare, Cologne, Germany, is visiting in Chicago to study welfare conditions here.

Senior Surgeon Otis B. Mallow, U. S. Public Health Service, Washington, D. C., has been appointed officer in charge of the U. S. Veterans' Hospital No. 30-A, Chicago.

Dr. William Schoenneshofer, Streator, has been appointed a member of the board of the LaSalle County Tuberculosis Sanitarium to serve for three years.

Dr. James P. Johnston has been appointed health commissioner of East Moline, to succeed Dr. Henry J. Love, who was recently drowned in the Mississippi river.

Dr. Henrietta A. Calhoun, Rockford, has been appointed lecturer in bacteriology and histology at Rockford College, and director of the laboratory at the Rockford Hospital.

Dr. Frank L. Alloway has resigned as chief of the eye, ear, nose and throat service at the U. S. Public Health Service Hospital No. 76, Maywood.

Dr. Furstman has resigned as director of health and hygiene of Peoria schools and has accepted a similar position in Los Angeles.

## News Notes

—At the annual meeting of the Chicago Urological Society the following officers were elected: Dr. Joseph S. Eisenstaedt, president; Dr. Harry B. Culver, vice-president, and Dr. Thomas F. Finegan, secretary-treasurer.

—Harry F. Shepard and S. J. Pole, according to reports, were arrested August 8 for practicing medicine without licenses. Shepard and Pole are barbers during the day, but in the evening are "doctors" with offices at 3108 Madison street.

—The board of education in East St. Louis has appropriated $5,000 for the establishment of medical inspection of pupils in the public schools during the coming season. According to reports the personnel for doing the work has not yet been chosen.

—Nearly 15,000 persons attended the dedication ceremonies of the Lutheran Memorial Hospital, Chicago, August 12. The hospital is a memorial, erected at a cost of $700,000, to Lutheran soldiers who died in the World War. A tablet containing 100 names was unveiled. Dr. George H. Schroeder, Chicago, has been named chief of staff at the hospital.

—During the first half of this year fifty-one well baby conferences were held under the direction of the state department of public health and fifty more are scheduled. Announcement was made that a number of requests for professional assistance at baby conferences has been turned down because the schedule of the medical staff available is completely filled.

—Mrs. Norman Bridge, wife of Dr. Norman

Bridge, professor emeritus, Rush Medical College, has subscribed $100,000 to the fund for the Rawson Memorial Laboratory to be built on the west side. The fund donated by Mrs. Bridge will provide the Norman Bridge Pathological Laboratories which will occupy the fifth floor of the Rawson Memorial Laboratory.

—Announcement has been made that seven physicians have been appointed as district health superintendents on the field staff of the state department of public health. The newly-appointed men are among those dropped from the department medical staff July 1, because of a cut in the appropriation. Civil service ratings and efficient public health service records were the determining factors which governed the appointments, according to Dr. I. D. Rawlings, state director of public health.

—The Society of Medical History of Chicago is forming a collection of things of historic interest to the medical profession of this region. Two files of much historic interest are not complete and it is likely that some physicians in the state may be glad to put such of the lacking volumes as they may have in a place where they will have a permanent value. The lacking volumes are: Chicago Medical Journal and Examiner, 1880 to 1889 (Vols. 40 to 58), and Transactions of the Illinois State Medical Society, Vol. 5 (1855) and from 1864 to 1871 inclusive. Please send to Dr. George H. Weaver, Custodian, 637 South Wood street, Chicago.

—Dr. Ethan Allen Gray, superintendent of the Chicago Fresh Air Hospital, attended the annual tuberculosis conference at Santa Barbara, Calif., recently. At that conference, Dr. Gray was elected to serve on the board of directors of the National Tuberculosis Association. Mrs. Theodore B. Sachs, superintendent of the Chicago Tuberculosis Institute, and Miss Francis A. Cook, health crusade director for the Institute, also attended the conference. Mrs. Sachs read a paper on "Tuberculosis Among Nurses" and Miss Cook supervised the performance of her health play "Seven Keys," given by Santa Barbara school children.

—The American Roentgen Ray Society will meet in Chicago September 18 to 21, with headquarters at the Congress Hotel. A number of eminent foreign contributors will appear on the program, and the announcements indicate that treatment by high voltage x-ray will have a prominent place on the program.

—At a recent meeting of the Central Illinois Radiological Society the following officers were elected: President, James H. Finch, M. D., Champaign; vice-president, Harold Swanberg, M. D., Quincy; secretary-treasurer, P. B. Goodwin, M. D., Peoria.

—The Physicians Fellowship Club of Peoria recently held an outing at the model dairy farm of Murray M. Baker. Senator Dailey was complimented by Dr. H. L. Pintler, president of the club, for his work in passing the new Medical Practice Act. Various practical jokes added to the enjoyment of the outing.

—It is said that a new "behavioristic" clinic will be established at Rush Medical College for the study of obstinate children on the plan of a similar clinic in Boston.

—The placement bureau of the Chicago Tuberculosis Institute is interested in finding positions for nurses and public health workers and supplying them where needed—not in placing tubercular applicants as stated in August JOURNAL.

## Deaths

WILLIAM A. KIMMET, Oak Forest, Ill.; Northwestern University Medical College, Chicago, 1892; a Fellow A. M. A.; specialized in surgery; assistant superintendent to the Cook County Infirmary and Tuberculosis Hospital; aged 51; died, August 12, following an appendectomy.

CHARLES EDWIN BEAVERS, Barry, Ill.; Northwestern University Medical School, Chicago, 1899; a Fellow A. M. A.; served in the M. C., U. S. Army, during the World War; aged 55; died, July 18, at the Blessing Hospital, Quincy, of septicemia, following a carbuncle.

FRANK B. BRESSLER, Oak Park, Ill.; Rush Medical College, 1889; aged 59; died, July 30, of heart disease.

MARY ANN DEARLOVE, Oak Park, Ill.; Bennett College of Electic Medicine and Surgery, Chicago, 1888; aged 84; died, July 20 of embolism, following a fracture of the leg.

FRANK BERNHARDT FASTABEND, Chicago; College of Physicians and Surgeons, Chicago, 1905; aged 54; died, July 22, of heart disease.

EDWARD B. HOBSON, Jerseyville, Ill.; Rush Medical College, Chicago, 1867; aged 80; died, June 27, at Kansas City, Mo., of senility.

GEORGE EUGENE RICHARDS, Chicago; Hahnemann Medical College and Hospital, Chicago, 1879; aged 70; died July 29, of carcinoma of the stomach.